FEBRUARY, 1961

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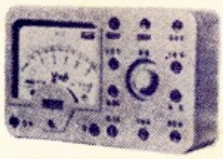

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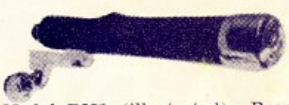

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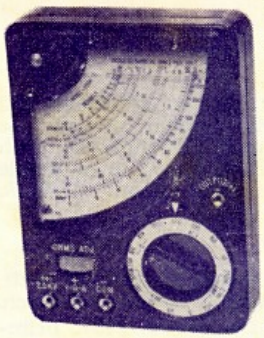

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AMATEUR RADIO

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EDITORIAL

★

The Use of Foreign Languages

FROM the inception of Amateur communication — particularly phone communication—Amateurs the world over, as a matter of normal habit, learned simple phrases and sentences of the other man's language which enabled him to converse more readily, at least to the extent of having an intelligent, even if short, QSO.

Thus it was until a few years ago when a Queensland Amateur was told he must cease speaking in French to a French Amateur who himself was permitted to speak in English. Both the Amateur and the French Amateur Society (R.E.F.) concerned represented the case to the Wireless Institute of Australia.

The Institute insisted that this was an incorrect interpretation of the Regulation and the Postmaster-General's Department rescinded its "you must speak English" attitude and gave notice that Australian Amateurs would be permitted to speak "plain language messages in any recognised foreign language."

For several years afterwards freedom of speech in respect of the Regulation was carried on by Australian Amateurs without any known case arising involving an Amateur in doing other than conduct an overseas contact in conformity with the conditions laid down for the operation of an Amateur Station.

Then for reasons of "security" and the "international situation" Amateurs were again banned from speaking in other than the English language, whilst broadcasting services and small ships transmissions continued using foreign languages without restriction.

Amateurs in Australia, as British subjects, and virtually "screened" before being issued with a license to transmit, should be beyond reproach when it concerns the security of our fair land, and the Institute was perturbed by the bad and erroneous reports coming from overseas—from the very countries from which the international goodwill of the Amateur Service derives its status.

The Postmaster-General has now seen our point of view, so once again freedom to speak in the language of the other man is available to the Australian Amateur. May the Amateur Service continue to function as the greatest exponent of international goodwill. The Amateurs of Australia thank you, Mr. Davidson.

FEDERAL EXECUTIVE.

THE CONTENTS

A.M. Without Splatter 3
A V.F.O. for 9 Mc. S.S.B.—by a BC458 Conversion 5
A High Efficiency Plate Modulated Class C Amplifier 7
Simplified Skywire System 7
The SCR522/542-A V.H.F. Equipment—Part One 8
A Polarity Sensitive Impulse Switch 11
Some Antenideas 11
A VK's Comments upon other Countries and their Hams 12
VK3BH Calling 9
National Field Day Contest 8
24th B.E.R.U. Contest 15
Book Reviews:
A.R.R.L. Antenna Book 8
Surplus Radio Conversion Manual, Vol. 3 8
Addresses of I.A.R.U. Member-Societies 13
VK9 QSL Service 15
Awards Issued by N.Z.A.R.T. 14
Correspondence 22
VHF 17
DX 19
SWL 18
Sideband 21
Notes 23

industrial power transistor OC35

Here is the OC35 — a new *power* transistor which supersedes the OC16 as a standard type for general use in industry. The OC35 is inexpensive and has a maximum current rating twice that of the OC16. It is well suited for use in a wide variety of industrial low frequency amplification and electro-mechanical applications, and in particular those equipments which are operated from a 12 volt supply.

With this new transistor, current gain is high and is well maintained up to high current levels — even at 6 amps the minimum large signal current gain is 20. The metal envelope is of the new standard *power* construction which saves space and provides efficient heat conduction to chassis or heat sink. The resulting low thermal resistance, together with the unusually high continuous junction temperature rating of 90°C for a germanium device, allows a maximum dissipation of 10 watts at a mounting base temperature of 75°C.

The data sheet on the OC35 gives detailed information to ensure satisfactory operation of the transistor in as many industrial circuits as possible.

Abridged data for Germanium Power Transistor OC35

V_{cb} max.	-60V
V_{ce} max. (cut-off)	-48V
V_{ce} max. (I_c = 6A)	-32V
I_c max.	6.0A
p_{tot} max. (at mounting base temperature 45°C)	30W
T_j max. (continuous operation)	90°C
T_j max. (intermittent operation 200 hours max.)	100°C
$\bar{\alpha}'$ (at I_c = 1A)	25 to 75
$\bar{\alpha}'$ (at I_c = 6A)	20 to 45

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A.M. Without Splatter

R. G. ROPER,* VK5PU

IN these days of s.s.b., d.s.b., f.m., and t.v.i. it is considered definitely "non-U" to even mention a.m., let alone devote a lecture to the subject. However, ancient (sorry, amplitude) modulation is used by over 90% of active Amateurs, and remains a most useful method of communication.

To the conscientious newcomer to Amateur Radio, one fact becomes quickly obvious. If he sets up his rig so that it is modulated 100% on voice peaks, he is immediately informed by any station he contacts that his signal lacks audio. He then applies the usual remedy, namely, the wick is wound up until the report from the other end is "loud and clear". The "and clear" is covered by a proviso; the modulator must be able to produce the required audio with tolerable distortion, and the final must have a reasonably high modulation capability. The only troubles arising from this procedure, as our new Amateur soon discovers, are an increase in interference problems. Neighbours complain that their favourite t.v. programmes are being torn up at odd intervals and local Amateurs mutter that the bands are rendered useless whenever that new young so-and-so is on. "Mutter" is used purposely; outright condemnation is seldom forthcoming since most Amateurs have come to accept splatter as a natural outcome of a.m., mainly because they have all adopted the same "winding up the wick" technique to "fill up their carrier" with more audio.

CAUSES OF SPLATTER

There are several factors which can cause splatter. Such things as overdriving an already over-rated modulator or piling audio onto a final with low modulation capability will produce splatter, and the remedies are obvious. However, by far the worst source of splatter is negative-peak clipping by the final, i.e. exceeding 100% modulation in the downward or negative direction. This is akin to a rapid switching on and off of the final h.t. and produces a series of splashes similar to those produced by a c.w. transmitter with no key-click filter. The modulator also contributes to this splatter, and this source will be treated in detail later.

VOICE POWER

In considering methods of increasing the amount of voice power which can be transmitted, it is necessary to first consider the nature of the speech waveform. One factor which is not always appreciated is that the predominantly unidirectional flow of air past the vocal chords produces an asymetry in the compressions and rarefactions making up the vocal sounds. This asymetry is preserved by the microphone, which produces an output voltage waveform having voltage peaks in one direction anything up to three times those in the opposite direction.

* 27 Leslie Street, Woodville, S.A.

● This interesting article is a summary of a lecture given to the VK5 Division at one of their monthly meetings.

If the number of stages in the speech amplifier and modulator is such that these higher voltage peaks modulate the final in the upward direction, considerably more audio can be applied to the final before negative-peak clipping occurs than if these peaks modulate the final in the downward direction.

Try reversing the connections to the modulation transformer primary (or secondary, but not both at once!) and determine which connection enables the wick to be turned up the furthest before negative-peak clipping commences. A c.r.o. should really be used to make this test, but the connection which produces the least modulation transformer talk-back for a given gain setting is the one to use.

A further investigation of the speech waveform reveals that its average power is only some 25% of its peak power. The usual method of raising the average power is clipping and filtering, and this can be done most efficiently at low levels. Good clipper/filter circuits have been described in overseas publications, and also in an Australian magazine.

The incorporation of a.g.c. in the speech amplifier is well worth while, since this keeps the voice level constant and applies full clipping at all times. The one disadvantage of such a system is the fact that background can become objectionable, but this is so in very few locations.

For intelligibility, while retaining voice individuality, a bandwidth of from 300 cycles to 3 kc. is adequate. Most of the power of the male voice is concentrated in frequencies below 500 cycles; these contribute little to intelligibility, and are, indeed, a liability, since, if not attenuated, they can cause ringing of the low-pass filter inherent in a clipper filter design, markedly reducing readability. Low frequency de-emphasis should therefore be applied before clipping. This is most easily achieved by the use of 470 pF. coupling capacitors between stages before the clipper.

Once the speech waveform has been clipped and then filtered to restrict the upper frequency limit of the distortion products generated by the clipping process, subsequent amplification can produce phase shifts which will result in peaking of the clipped waveform. This is undesirable, since it reduces the average to peak power ratio, and hence reduces the average power able to be applied to the final before overmodulation occurs. To minimise this undesirable phase shift, the low frequency response of the stages following the clipper/filter should be as good as possible. This includes the low frequency response of the modulation transformer, which is improved by the capacitor/choke coupling described later.

AMOUNT OF AUDIO

The performance of the modulator has now been considerably improved, but one factor has been overlooked. To plate modulate a final amplifier 100%, an amount of audio equal to 50% of the final input is required. This statement appears in most text books, and is accepted as gospel by most Amateurs. However, the statement is true only if the modulating waveform is a pure sine wave, which is far from being the case with clipped speech. If the modulating waveform is a square wave, then the audio power required for 100% modulation is equal to the final input power.

The clipped speech wave lies somewhere between these extremes, and the modulator must be capable of producing this power if clipping and filtering is not to be wasted, i.e. if the final input is 100 watts, then the modulator should be capable of producing an average 100 watts of audio.

Previously, without clipping, the modulator was required to produce 50 watts on voice peaks, the average power requirements being considerably lower than this. This kind of power can be obtained from modulator tubes using cathode bias, but these types are definitely out for the new requirements unless the final input is reduced to 50 watts.

Possibly the best modulator for running the legal limit is a pair of zero-bias 807s, but the 811A should not be overlooked. With 750 volts on the plates, a pair of 811As will produce over 200 watts of audio, and are ideal if high-level clipping is to be used also.

Most readers will, at this stage, be thinking, "Well, that fixes me. I've only got a 50 watt mod. tranny, and I can't expect to get 150 watts out of it without blowing it up!" Have courage, men! There is very little chance of "blowing up" a 50 watt mod. transformer by trying to make it take more than its rated power. In most cases, it just won't pass the extra, not because of current or voltage limitations, but because of core saturation. With the d.c. current of the final flowing through the secondary, the core has a considerable magnetic bias. One tube of the class B modulator will draw current for one half-cycle of the modulating frequency which will tend to cancel this bias. Unfortunately, this is the half cycle which is reducing the final plate voltage, i.e. the negative modulation cycle. The other class B tube will provide a pulse (on the other half cycle) which increases the core bias and, if large enough, produces core saturation and peak clipping on the positive modulation cycle.

If, however, the final d.c. current is removed from the secondary, the positive modulation half cycle may be increased to twice the previous value

before core saturation occurs. This corresponds to an increase of four times in power handling capability. What was a 50 watt transformer with d.c. in the secondary, is a 200 watt transformer with the d.c. removed.

The easiest way to effect this removal is to feed the final h.t. through an audio choke, earth one end of the mod. transformer secondary, and connect the other end to the top of the choke via a capacitor (see Fig. 1). The choke should have a minimum inductance of 10H. and be capable of passing the final plate current. Insulation requirements are fairly stringent; the choke must be able to stand an audio voltage equal to the h.t. across it, and twice (preferably three times) this voltage from winding to core. The latter is the most difficult to satisfy; the difficulty can usually be overcome by isolating the core from ground by mounting the choke on stand-off insulators. Never touch this choke while the h.t. is on; a core-to-windng short will bring the body of the choke to h.t. potential. [For safety, place an earthed shield over the choke.—Ed.] The capacitor should be 2 μF. or greater and have a working voltage rating at least equal to the final h.t. A lower voltage capacitor can be used if the other end of the mod. transformer secondary is connected to the power supply end of the plate feed audio choke, instead of to ground.

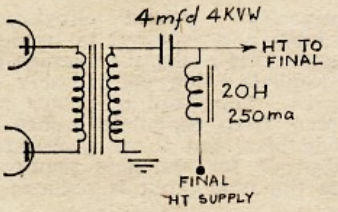


Fig. 1.

Removing the secondary d.c. also increases the low-frequency response of the transformer, which is to the good if a clipped waveform is being handled.

Even when all the above modifications have been made, splatter is still possible, due either to distortion introduced by the modulator, or by once again winding up the wick after the clipper. This can be prevented by the use of a high level clipper **and filter.**

High level clipping introduces higher order harmonics just as does low-level clipping and these, without a subsequent filter, will produce splatter. The clipper usually used consists of a diode capable of carrying the final current, in series with the modulated h.t. to the final. This series limiter suppresses negative peak clipping in the modulated r.f. amplifier which results from large amplitude negative peak modulating signals. The high level filter removes not only the transients due to the limiting action of the series diode, but also high order harmonics due to modulator distortion.

THE MODULATOR

As mentioned previously, there is another source of splatter in over-modulation of a final; this splatter originates in the modulator and has received very little attention in the past. Provided the final is operating in class C, its plate voltage/plate current characteristic is linear, i.e. it presents the same resistive impedance throughout the modulating cycle for modulation percentages up to 100. However, once the plate voltage on the final becomes negative when overmodulated, the impedance offered to the modulator is infinite. (Actually it is the sum total of the series impedance offered by the modulation transformer leakage reactances, the last filter condenser in the final supply, and the final plate by-pass capacitor, which total is large at audio frequencies.)

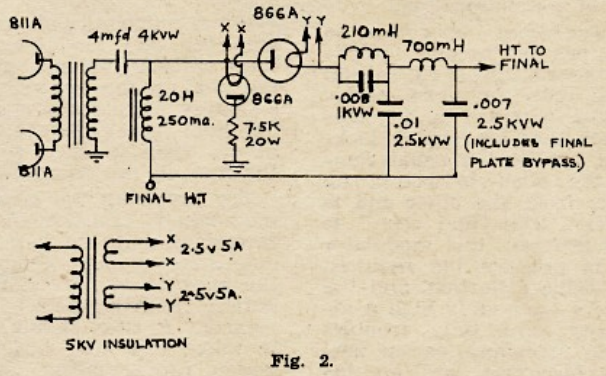


Fig. 2.

The disastrous consequences of operating a class B modulator without load are well known. Extremely high voltages are developed across the windings of the mod. transformer, which can lead to insulation breakdown and subsequent destruction of the transformer or class B tubes. Fortunately, most transformer manufacturers have included in their products a spark gap which arcs over before insulation is punctured.

Contrary to popular belief, transformer talk-back is not always due to lamination rattle, but is usually due to arcover, producing an arc which sings at the modulating frequency. The transients associated with this arcing are coupled to the final tuned circuit via the h.t. line, producing damped oscillations peaking at the tank resonant frequency. In the author's opinion, this, rather than the negative peak clipping by the final, is the main source of splatter. The use of a high level clipper filter will remove these transients, but the dangers of tube or transformer breakdown in the modulator still remain, and talk-back can produce annoying feedback if a high gain speech amplifier is in use.

The incorporation of a diode and series resistor between final h.t. and earth after the modulator, but before the clipper filter will provide a load for the modulator when the top of the mod. transformer secondary becomes negative with respect to earth. Note that this is not the so-called negative cycle loading which is assuming some popularity in this country. Negative cycle loading works because it minimises the possibility of the application of negative pulses to the final, and prevents open circuit of the mod. transformer secondary, which are the main causes of splatter, but it does introduce distortion and should be used in conjunction with a high level filter if these distortion products are not to widen the signal spectrum. Negative cycle loading is also a power waster, since modulator output power is dissipated in the loading resistor as soon as the final voltage falls below the quiescent carrier condition, whereas in the circuit of Fig. 2 the modulator load diode and resistor dissipate only power which cannot be applied to the final anyway.

HIGH LEVEL CLIPPER FILTER

Fig. 2 is the circuit of a high level clipper filter incorporating all the above mentioned facilities. Provided the modulation capability of the final is high (preferably triodes with plenty of drive, but watch out for harmonic output from any hard-driven final), and the modulator can deliver the power, up to three times the amount of audio required for 100% modulation can be applied without splatter. If a low level clipper and filter is used also, this means 300 watts of audio on 150 watts of carrier input. Some loss of voice individuality is, of course, inherent in this practice.

A word of warning. Because of the asymetry about the carrier level of the resultant final plate voltage after high level clipping and filtering, the average plate input will rise with modulation. If 100 watts of audio is applied to what is nominally 100 watts input without modulation, the average input will rise to 116 watts. To comply with regulations, a station running the legal limit will have to proportionately reduce the final input as more audio is applied.

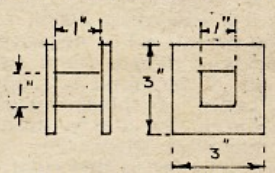


Fig. 3.—Details of inductance bobbin.
700 mH., 3,650 turns of No. 30 S.W.G. enam.
210 mH., 915 turns of No. 24 S.W.G. enam.

If the modulation transformer is set up to match the modulator tubes with the secondary at 7,500 ohms, then the filter network shown will work satisfactorily for any final whose impedance lies in the range from 5,000 to 10,000 ohms. The two filter inductances are air cored and wound on similar wooden formers, and should be mounted with their axes at right angles to minimise inductive feedthrough. Glue the ends to the formers, and mount on wooden blocks. Do not use any bolts or nails (brass or otherwise) since these can considerably reduce the effective Q of the coils and adversely affect the filter characteristics. ●

A V.F.O. FOR 9 Mc. S.S.B.— BY A BC458 CONVERSION

J. K. HERD,* VK3JK

PROBABLY the most stable oscillator available at present for use with 9 Mc. type s.s.b. exciters is the versatile Command transmitter. Preferably, the 5.3 to 7 Mc. BC458 is more easily converted, or next in favor is the 4 to 5.3 Mc., but this one needs some three turns removed from the top of the oscillator coil.

I will not go into the matter of general alteration, but briefly it amounts to putting **all** filaments in parallel for 12 volt operation and removal of all superfluous wiring, as well as removal of the two relays and neutralising condenser. [All wiring associated with the m.o. (1626) is left untouched and the conversion commences from T53 coil C —refer to original circuit of BC458 shown. The "magic eye" wiring may be removed if required.—Ed.]

The rotary ceramic antenna coil and all its hardware, likewise, comes out to make room for a switch and condenser on the front panel.

The one here has a piece of aluminium bolted inside the front panel above the chassis and, in the space which previously held the graduated window, a 0-100 pF. air trimmer (0-50 pF. will do) and a switch—single bank 2-pole 5-position, either bakelite or ceramic, preferably the latter—has been located.

The second 1625 tube, V2, is retained and performs as a frequency multiplier and simplifies the production of correct injection frequencies for the various bands, which are as follows:—

3.5 Mc. = 9 Mc. — 5.5 Mc.
7 Mc. = 9 Mc. from 16 Mc. (3 × 5.3 Mc.)
14 Mc. = 9 Mc. + 5 Mc.
21 Mc. = 9 Mc. + 12 Mc. (2 × 6 Mc.)
28 Mc. = 9 Mc. + 19 Mc. (3 × 6.3 Mc.)

The metal can condenser (3 x 0.05 μF.) should be removed and either ceramic disc or mica used in place thereof, as indicated in the sketch.

The best operation will be had if a regulated voltage (105v.) is applied to all plates and screens.

Referring to the sketch, the grid condenser of the second 1625 (V2) is soldered to the fourth turn from the top of the ceramic coil which is the existing plate coil of V1, a small hole being drilled in the chassis between that coil and the tube recesses to carry an insulated wire to grid of V2.

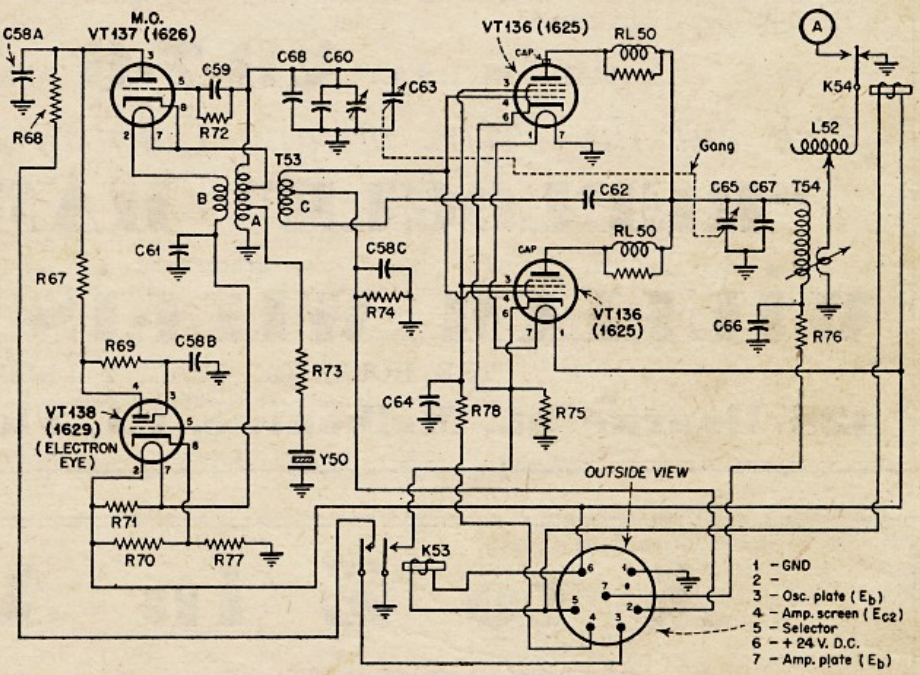
Check **all** earth connections and finally remove the original screen bypass and replace with a 0.01 μF. ceramic disc and by-pass the 1625 filaments at the socket!

The output coils in the switched section are resonated to the required frequencies **after** the co-ax lead is attached to S1 by means of a g.d.o., and C1 is used to peak them up. They should be about ¾ inch diameter and connect to a buswire which connects two screws at the front of the chassis, one each side.

The rest is self explanatory, but if troubles occur, a letter to the writer will be replied to.

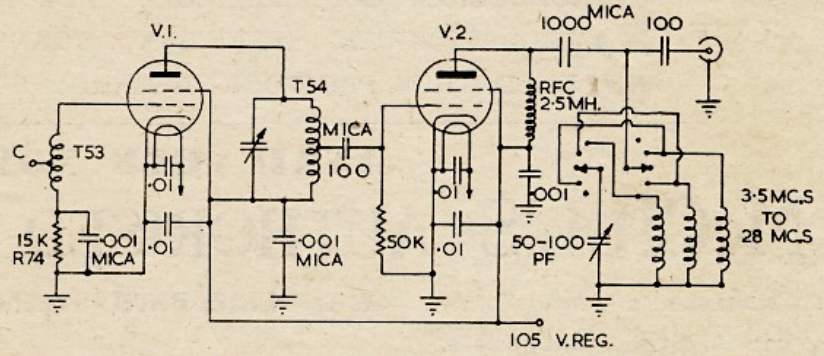
The 1629 magic eye tube is a direct replacement as an oscillator for the 1626 **and seems to do the job better!**

VK3TW now uses the one described herein, and a 90-minute QSO a few days ago did not necessitate retuning the receiver during the contact, while talking to him. ●



Original circuit diagram of BC458.

C58A, C58B, C58C—0.05 μF.
C59—0.00018 μF.
C60—Master oscillator padding.
C61—0.006 μF.
C62—Fixed neutralising.
C63—Master oscillator tuning, 220 pF.
C64—0.002 μF.
C65—Power amplifier tuning.
C66—0.01 μF.
C67—Power amplifier padding.
C68—3.0 pF.
C69—50 pF.
K53—Transmitter selector relay.
K54—Transmitter output relay.
L52—Antenna loading coil.
R67, R72, R75—51,000 ohms.
R68, R76—20 ohms.
R69—1 megohm.
R70—1,000 ohms.
R71—126 ohms.
R73, R74—15,000 ohms.
R77—390 ohms.
R78—51 ohms.
RL50—Parasitic suppressors.
T53—oscillator coils.
T54—Amplifier coils.
Y50—Crystal unit.
7-prong female plug, outside view.



T53—Existing oscillator coil of 1626. (See the original circuit diagram of BC458.)

T54—Existing ceramic plate coil of V1. Condensers not indicated are ceramic disc.

* Shelbourne Court, Mornington, Vic.

A HIGH EFFICIENCY PLATE MODULATED CLASS C AMPLIFIER

FOR nearly three decades the power output from a good quality plate modulated Class C amplifier has run between 66⅔% and 70% of the d.c. input—the Australian Broadcast Control Board, in its Standards, taking 66⅔% when using the indirect method of rating the power of a broadcast station.

Now comes a revolution, for the new R.C.A. BTA-5T, 5kw. broadcast transmitter operate its Class C amplifier at 90% plate efficiency.

Details were given by I. R. Skarbec in the March 1960 issue of R.C.A's. "Broadcast News."

The method of achieving this great increase in efficiency is just about as simple as falling off a log.

The circuit arrangement is very similar to a standard plate modulated Class C amplifier except for a parallel tuned circuit in series with the plate and another similar resonant circuit in the cathode circuit.

Both these resonant circuits are tuned to the third harmonic of the fundamental r.f. frequency.

★ A recent development in the Broadcast field increases the output from a Class C amplifier to 90% of the total d.c. plate input.

When these circuits are properly adjusted, the r.f. output wave-shape is no longer sinusoidal, but becomes relatively flat near the peak, and results in a plate efficiency of 90 to 92%.

When the Class C amplifier is driven, the harmonic content of the grid input power sets up and maintains circulating current in each of the parallel tuned third harmonic resonators. The resonators are designed to store high kva., therefore the total voltage supply at the anode is composed of the normal d.c. plate supply and the super-imposed oscillatory potential equal to that built up across the plate resonator.

This oscillatory voltage, being at the third harmonic, vectorially adds twice to, and subtracts once, from the fundamental, thus producing a flat-topped wave form.

When the cathode resonator is adjusted to the third harmonic, the instantaneous grid to cathode potential modifies the cathode emission to approximate a rectangular pulse.

An improvement of six to seven per cent. is obtained from the anode resonator and the balance from the cathode resonator.

All this adds up to a reduction in anode dissipation.

Should the resonators be mis-tuned, the amplifier returns automatically to the usual type.

Tuning up is similar to the conventional amplifier tuning but the dip is much broader.

Life tests on a number of valves showed no deterioration due to the new system, whilst the frequency response and distortion meet broadcasting standards, plus or minus 1 db. 30 c.p.s. to 10 Kc.

Three per cent. distortion at 95% modulation with better than 2% over most of the audio range.

It is understood that the new 50 kw. transmitter for 3WV Horsham is using this system, but with fifth harmonic. This is an S.T.C. job.

—VK3AXU.

SIMPLIFIED SKYWIRE SYSTEM

HAVING devoted lots of time, care and study to design of the new transmitter, we proceed to use lots more hard work to building it. Finally it's just the way we want it and generating the proper amount and quality of r.f. energy which we now proceed to feed to antennae.

At this point troubles seem to crop up, if observation of various antenna set-ups, and remarks on the air, are any guide.

We all know that the feedline impedance shall match that of the antenna feedpoint or lots of that precious r.f., so laboriously generated, will be dissipated in the wrong manner!

A popular and simple approach to the antenna problem is a dipole, centre fed with a line of 72 ohms characteristic impedance. It seems to matter little whether it be twin-lead or co-ax. from the practical standpoint, notwithstanding contentions of the theorists that the feeder must be a balanced line, e.g. "twin-lead."

One well known firm, for instance, make a centre connector for feeding dipoles with 50 or 72 ohm co-ax. and what is more, it works!

At this location the frequencies for which a wire antenna is required, are 80, 40, 20 and 15 metres and is in the form of three dipoles with a common feedpoint and 50 ohm co-ax. feed line.

The triband beam here is atop a 50 ft. telephone pole and this latter is the support for the above mentioned dipoles, the lengths of which were determined from formula 468 ÷ freq. in Mc. to suit the portion of the spectrum desired, viz. 3.7 Mc., 126 ft. 6 in.; 7.1 Mc., 66 ft.; 14.25 Mc., 32 ft. 9 in., and of course 7.1 Mc. is also 3/2 waves for 21.3 Mc.

The low-frequency (80 metres) wire happens to be bare hard-drawn 16 gauge copper, but 7/20 would do. A 3-inch Pyrex insulator can be used at the centre if no special type is available and each arm of the low-frequency dipole is then 63 ft. 3 in.

The other two dipoles are made up using sections of open 300 ohm t.v. feeder (not the poythene tape variety), so that there is 16 ft. 4 in. each side of the centre insulator; to one wire of each arm is added sufficient wire of similar gauge (about 18 gauge) to increase the length to 33 feet each side of centre. This one is the dipole for 7 Mc. and the 3/2 wave for 21 Mc. The remaining dipole of 16 ft. 4 in. is for 20 metres. If one wishes a further dipole can be hung on for 10 metres and would be approximately 16 feet long or 8 feet each side of centre.

The easiest method of support is to use a single pole and to let the outer ends droop on each side to fences or what have you.

Some few years ago, "QST" had an article on "drooping-dipole" antenna and work on them suggested a feed point impedance of 50 ohms or thereabouts and I found that a "Monimatch" agreed with that, for there was mighty little reflected power using 50 ohms co-ax. (RG8/U).

RG58/U, the small diameter co-ax. is splendid for this use, at powers in use in VK and "Telcon" market it as PT45/M and is reasonably priced, new.

At some locations three and more dipoles are to be seen fed in many ways, even including P.V.C. lighting flex as feedline!

With a well designed antenna coupler, of course, one dipole will do—the low-frequency one—and some t.v. open wire 300 ohm feeder will serve perfectly to feed it, but the multiple dipoles are easy to make, give a near-perfect match of feeder to antennae, and require simple support. There's no need to be anxious about erecting this array, for I use it and it does work!

The use of 50 ohm co-ax. permits working of a pi-network into the line and it seems that this type of coupler is now pretty commonly used, in final amplifiers.

The array could be fed with 72 ohm twin-lead—"Telcon K20"—but this may give a small mismatch and poses the problem of making baluns to work into a pi-network.

The small booklet "S9 Signals," by Wm. Orr, W6SAI, could be of great value to many of us.

The construction of the drooping dipoles is a matter of individual choice and supports offering, and there can be several variations, of course. The main thing is that they have a common feeder and feed point and we do not need five separate dipoles and separate feeders around the house, to enable the use of the five bands from 80 to 10 metres—with a single pole to support the array!

—VK3JK

THE SCR522/542-A V.H.F. EQUIPMENT

PART ONE

A. G. MULCAHY,* VK2ACV

THE SCR522 series v.h.f. transceivers have, of recent years, been perhaps the most readily available item of disposals equipment.

It is proposed in this article to deal with some of the conversion possibilities of the equipment, and its ancillaries, and to briefly outline the theory of operation of the unmodified equipment.

The SCR522 was designed to provide two-way communication, on four channels, within the range 100 to 156 Mc., with a power output of 8 to 9 watts. The associated receiver has a sensitivity of 3 to 4 microvolts input for 10 milliwatts output at 10 to 1 signal to noise ratio.

TRANSMITTER—BC625

The transmitter operates on any one of four crystal controlled channels in the range 100-156 Mc.

The crystal controlled oscillator's plate circuit is tuned to twice the crystal frequency which is 5,560 Kc. at 100.08 Mc., and 8660 Kc. at 155.88 Mc. (The 2 metre band crystals lie between 8 Mc. at 144 Mc. and 8220 Kc. at 147.96 Mc.)

The 6G6 oscillator output is then fed into two tripler stages (a 12A6 and 832) to emerge at 18 times the crystal frequency to drive the 832 p.a. stage.

Two 12A6 tubes in push-pull are used to amplitude modulate the carrier, whilst a 6SS7 tube serves as an a.f. speech amplifier when relay 131 is released or as an audio oscillator when relay 131 is energised by an external "contactor". This facility would be of use if m.c.w. on 2 metres is required.

The only other tube on the transmitter chassis is a 6SS7 tube connected as a diode and used to detect the presence of r.f. at the p.a. plate tank coil. The rectified r.f. thus obtained is filtered and may be read on position 4 of the transmtiter metering switch.

R.f. output is taken via an adjustable link, coupled to the p.a. tank coil, and feeds via the aerial change-over relay to the co-axial socket on the FT244A type rack. This facility was omitted in some models.

RACK—FT244A

The FT244A serves as an interconnecting medium for the transmitter, receiver, antenna, power unit and remote controller. The rack secures to the transmitter and receiver units per eight screws (painted red) and provides inter-connection wiring, channel change motor mounting, antenna relay facility and external cabling connecting sockets. Note that the antenna relay is actuated in the receive position—de-energisation of this relay places the antenna to the transmitter.

The larger multi-pin connector connects to the controller, whilst the smaller connects to the PE-94 or PE-98 power unit.

* 45 Louie Street, Padstow, N.S.W.

• A new series upon popular disposals items which, by the kind co-operation of the author, will feature different units from time to time.

RECEIVER—BC624

Three principle variants of the receiver are available, these are the BC624A, AM or C. All receivers operate on any one of four pretuned crystal controlled channels in the 100 to 156 Mc. range. I.f. is 12 Mc. The local oscillator operates below the signal frequency and is 11 times the oscillator crystal frequency from 100 to 108 Mc. —12 times from 108 to 116 Mc., 13 times from 116 to 124 Mc., 14 times from 124 to 132 Mc., 15 times from 132 to 140 Mc., 16 times from 140 to 148 Mc., and 17 times from 148 to 156 Mc. Receiver oscillator crystals for any channel fall within the range 8 to 8.72 Mc., the appropriate harmonic being selected for injection to the mixer by correct setting of the receiver oscillator tuning head.

All receivers employ one stage of r.f. amplification feeding a mixer stage. Local oscillator injection is inductively coupled to the mixer. The local oscillator train consists of half a 12AH7GT with a selected crystal between grid and ground and having a resonating inductor in its plate circuit. The oscillator feeds a harmonic generator which, in turn, drives a harmonic amplifier—both these latter stages are tuned by a two-gang differential capacitor coupled to the oscillator tuning head knob.

Three stages of i.f. amplification at 12 Mc. are employed.

From the detector stage onwards the various receiver models differ somewhat. The BC624A employs a 12C8 det., a.v.c., 1st audio; half of the 12AH7 plus relay 246 for squelch, and a 12J5GT for audio output.

The BC624AM employs a 12H6 tube for noise limiting and a.v.c. delay functions, but is otherwise similar in its audio circuitry to the BC624A.

The BC624C differs considerably from the A and AM versions. The tube lineup from the detector onwards is: Detector and noise limiter, 12H6; a.v.c. delay and 1st audio, 12AH7GT; a.v.c. detector and 2nd audio, 12C8; audio output, 12A6. The second 12AH7GT valve, which serves as the crystal controlled fundamental oscillator, has its second triode employed in an electronic squelch circuit, the threshold point of which may be set by adjusting potentiometer 238A.

The audio output impedances available are 8,000 ohms at terminal 5 of transformer, 200 and 600 ohms at terminal 4.

A metering point is provided on all receivers, for A and AM units the r.f. amp. plate current is metered, whilst in the C series the i.f. 1 cathode current is metered. The idea was to observe a.v.c. control on plate current as an indication of equipment operation.

POWER UNITS—PE-94 and 98

These units provide all h.t., bias and l.t. voltages required by the equipment. Outputs available are 14.5v. 4.9a., 150v. negative at 10 mA., and 300v. at 260 mA. The dynamotor has both series and shunt fields and a regulated shunt field for voltage stabilisation. Current consumption (28v.), on transmit, is 11.5a., and 11.1a. on receive. Current drawn in 14v. installations is double that on 28v.

Circuit diagram of the transmitter, BC625, is shown on the opposite page. Some suggested modifications will be given in Part Two to appear next issue.

★

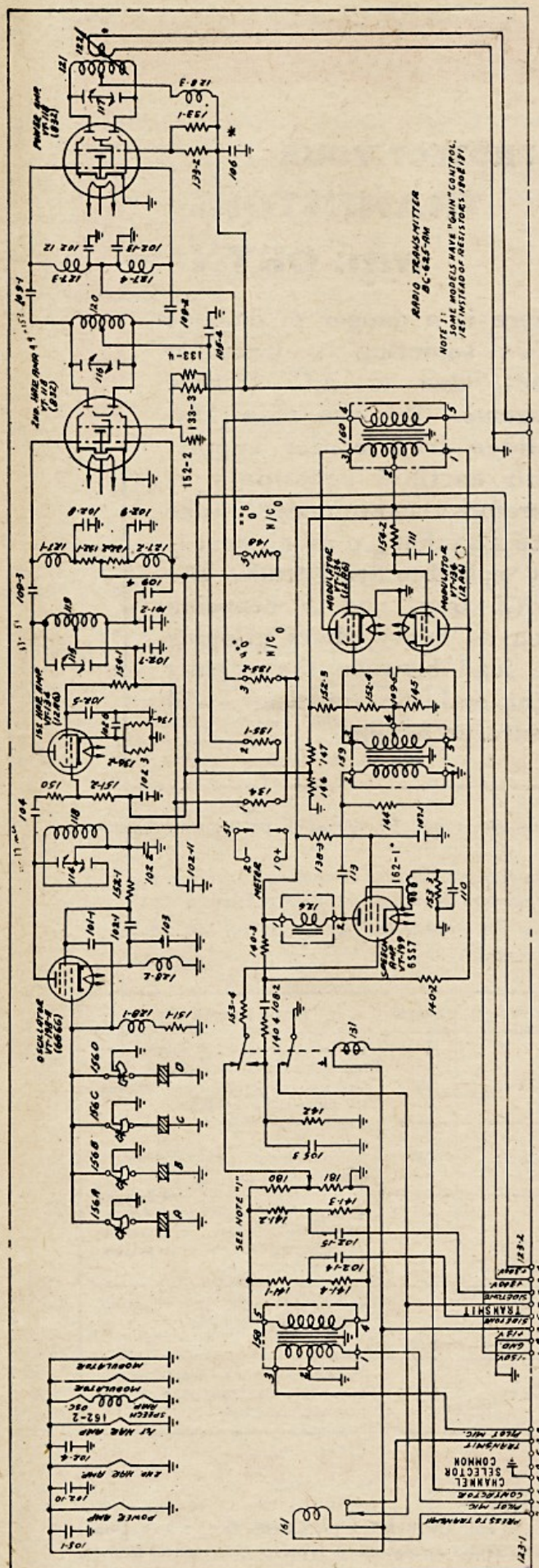
NATIONAL FIELD DAY CONTEST

Contestants in the above contest are reminded that their logs should be set out as indicated in the Rules published in "Amateur Radio" for January 1960.

All entries must be post-marked not later than Saturday, 4th March, 1961, and addressed to the Federal Contest Committee, W.I.A., Box 851J, G.P.O., Hobart, Tas.

PHOTOGRAPHS

The Editor requests all contestants in the National Field Day Contest to send in photographs of on-site shots for publication in "Amateur Radio." Each photograph received will be returned to the sender, and a prize is offered for the best photograph submitted.



Transmitter—BC625

100—15 pF. ±1 pF.
101—10 pF. ±0.5 pF. N.P.O.K.
102—0.006 μF. ±20%.
103—50 pF. ±1% sil. mica.
104—100 pF. ±5% N.P.O.D.
105—0.001 μF. ±10% mica.
106—0.002 μF. ±5%, 800v. mica.
107—0.1 μF. ±10%, 400v. mica.
108—0.001 μF. ±5%, 500v. mica.
109—20 pF. ±1 pF. N.P.O.L.
110—1 μF. ±15%, 100v.
111—0.5 μF., 400v.
113—0.0003 μF.

114—11 pF. ±1 pF. min., and 65.5 pF. ±1.5 pF. max., in parallel.
115—3.5 pF. ±1 pF. min., and 27 pF. ±1 pF. max., in series.
116—3 pF. ±1 pF. max., and 16.5 pF. ±1 pF. max., in series.
117—2.8 pF. ±1 pF. min., and 11 pF. ±1 pF. max., in series.
118—9½ turns, 28 g. enamel.
119—5 turns, 10 g., tapped 7 turns.
120—10 gauge.
121—2-0-2 turns, 10 g.
122—3 turns, 10 g.

125—1 meg., C taper.
126—430H., 5,000 ohms, 1 mA. max.
127—1 amp. 2½M. r.f. choke.
128—2.5 mH., 125 mA., 500 ohms, 1 pF.
130—Relay, 12v., 200 ohms, 0.2 μS.
131—200 ohms, 12v.
132—25,000 ohms, 1w.
133—40,000 ohms, 1w.
134—1.53 ohms, 5w.
135—0.76 ohm.
138—1 meg., 5%, 1w.
140—½ meg., 5%, 1w.
141—1 meg., 5%, 1w.
143—82 ohms, 5%, 1w.

144—½ meg., 5%, ½w.
145—15,000 ohms, 5%, 1w.
146—6,000 ohms, 5%, 1w.
147—18,000 ohms, 5%, 1w.
148—75 ohms, 5%, 1w.
150—50 ohms, 5%, 1w.
151—50,000 ohms, 5%, 1w.
152—50,000 ohms, 5%, 1w.
153—2,000 ohms, 5%, 1w.
154—5,000 ohms.
158—1 : 45.7 ratio.
159—1 : 2 ratio.
160—2 : 1 ratio.
162—38 turns, 28 g. enamel.

VK3BH Calling

Benalla High School (Vic.) has been allocated the call sign VK3BH and will soon be operating the State's newest Amateur Radio station.

The licence granted the school to operate Station VK3BH has old Benalla significance, for it was that call which was used there 30 years ago by the late Mr. Charlie Whitelaw.

Mr. Gazzard, headmaster, said that the ultimate aim was the establishing of night classes. The Advisory Council gave the proposal full approval and pledged all possible support.

"We know where we are going and what we are going to do," Mr. Gazzard said. "The idea came to us from Mr. Ken Rankin (VK3KR). It was his suggestion and he has done a tremendous amount of the spadework. He approached the P.M.G's. Department and so on, and has had the full support of Amateur Radio enthusiasts."

An application has now been made to the Education Department for permission to establish a radio club in the school. The aims and objects of the club are:

- To stimulate interest in and knowledge of radio in the town, and particularly in those aspects relating to the setting up and operation of Amateur Wireless Stations.
- To provide members with a hobby to enable them to make interesting use of their leisure time.
- Instruction and training of young people in the setting up and operation of an Amateur Wireless Transmitting Station.

It is hoped that such instruction will lead to other things, such as the provision of personnel capable of giving valuable help as trained operators in rural fire brigade units and generally to help in any emergency.

Mr. Gazzard said that assurances of assistance had been given by the District Manager of State Electricity Commission (Mr. Archer), the Postmaster (Mr. Dnunachie), by Mr. Simmonds (of the P.M.G. Dept.), and by other interested persons.

"Everyone is keen about the whole thing," Mr. Gazzard said. "I gather from what Mr. Pedler of the technical staff at the school that there will be a favourable response from the students.

"There are many with a keen interest in Amateur Radio in this district. Off-hand I can mention the Shire Engineer, Mr. Carlyle, and Mr. Campbell, of the P.M.G. Department."

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ORYX

(LOW VOLTAGE)

MINIATURE SOLDERING INSTRUMENT

A must for Transistors

(actual size)

PROTECT YOUR TRANSISTORS WITH ORYX

There is a danger of damage when soldering to transistor leads, due to A.C. leakage currents. The use of a low-voltage transformer supply, with earthed secondary is therefore recommended. Take care also that too much heat is not applied to flying leads. The ORYX iron, and a heat-sink such as heavy pliers gripping the lead between the contact point and the transistor, will ensure protection.

- *Fast heating element, ready for operation in less than one minute.*
- *Exclusive design features resulting in universal acceptance of ORYX as the standard miniature soldering instrument.*
- *The ORYX long life element will outlast several bits which are of tight push-on fit.*

Bit Dia.:	Volts	Watts	Nett Weight	Length	Recommended Use
Model 6 1/16″ (Fixed)	6	6	0.25 oz.	6″	Electrical measuring instrument fine assemblies, hairsprings, R.F. pick-up and speech coils, hearing aid sub-assemblies, etc.
Model 6a 3/32″ (Push-on)	6	6	0.25 oz.	6″	As for Model 6 (for extremely delicate work only).
Model 9 5/32″ (Push-on)	6, 12, 24-27½	8.3	0.25 oz.	6″	Hearing Aids, Radio and TV Sub-assemblies, Coils, Electronic Instruments, Model Construction, Electro-Medical, etc.
Model 12 3/16″ (Push-on)	6, 12, 24-27½	12	0.5 oz.	6.25″	Radio, Television, and Telecommunications assemblies.
Model 18 3/16″ (Push-on)	6	18	0.75 oz.	7¼″	For heavier work, heat capacity equivalent to that of most 80 watt soldering irons.

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MELBOURNE: Amalgamated Wireless (Australasia) Ltd. ADELAIDE: Newton McLaren Ltd. PERTH: Atkins (W.A.) Ltd.; Carlyle & Co. (1959) Pty. Ltd.; A. J. Wyle Pty. Ltd. BRISBANE: Chandlers Pty. Ltd. HOBART & LAUNCESTON: Amalgamated Wireless (Australasia) Limited.

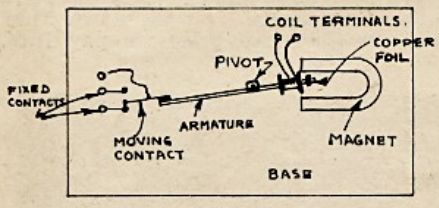
MSP3.58

A POLARITY SENSITIVE IMPULSE SWITCH

B. M. OLIVER,* VK2ZLM

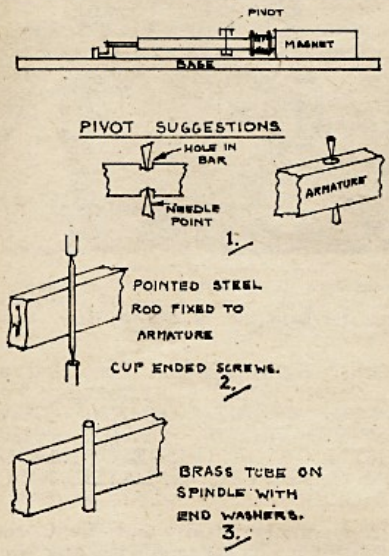
THIS unusual type of switch is really an elementary form of relay, but "latches" into position after each pulse until another pulse of opposite polarity moves the armature. It could possibly be referred to as a bistable switch.

Construction is simple as only two essential components are needed. One headphone bobbin (preferably high impedance) and one small fairly powerful horseshoe permanent magnet. The remainder is odds and ends.



Components can be mounted on any non-magnetic base including wood and plastic materials.

A strip of mild steel of the same cross section as the pole piece of the headphone bobbin is needed (or can be cut and filed up) 6 inches long. The bobbin is placed as shown and the pivot arranged at the balance point to avoid undue wear. Fasten magnet securely. Old relay contacts provide the working contacts to any desired arrangement.



See sketches for details, rest is ingenuity. Ideal for battery transmitters as drain is nil and can be made much smaller if required with miniature coil; the miniature magnets can be obtained from old M/C meters.

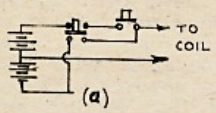
Don't forget the residual gap or the armature will stick. Thin copper foil strip, copper rivet (or go de luxe and fit adjustable screws to the pole pieces). If the armature coil is light, armature mass small, and properly balanced with short travel and a powerful magnet, this operates in any position, otherwise horizontal please.

* 8 Edward Street, Oatley, Sydney, N.S.W.

OPERATION

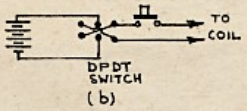
Spring return push button:—

(a) Two battery source (or tapped battery).



Note.—Double contact button to prevent damage if both buttons pressed together.

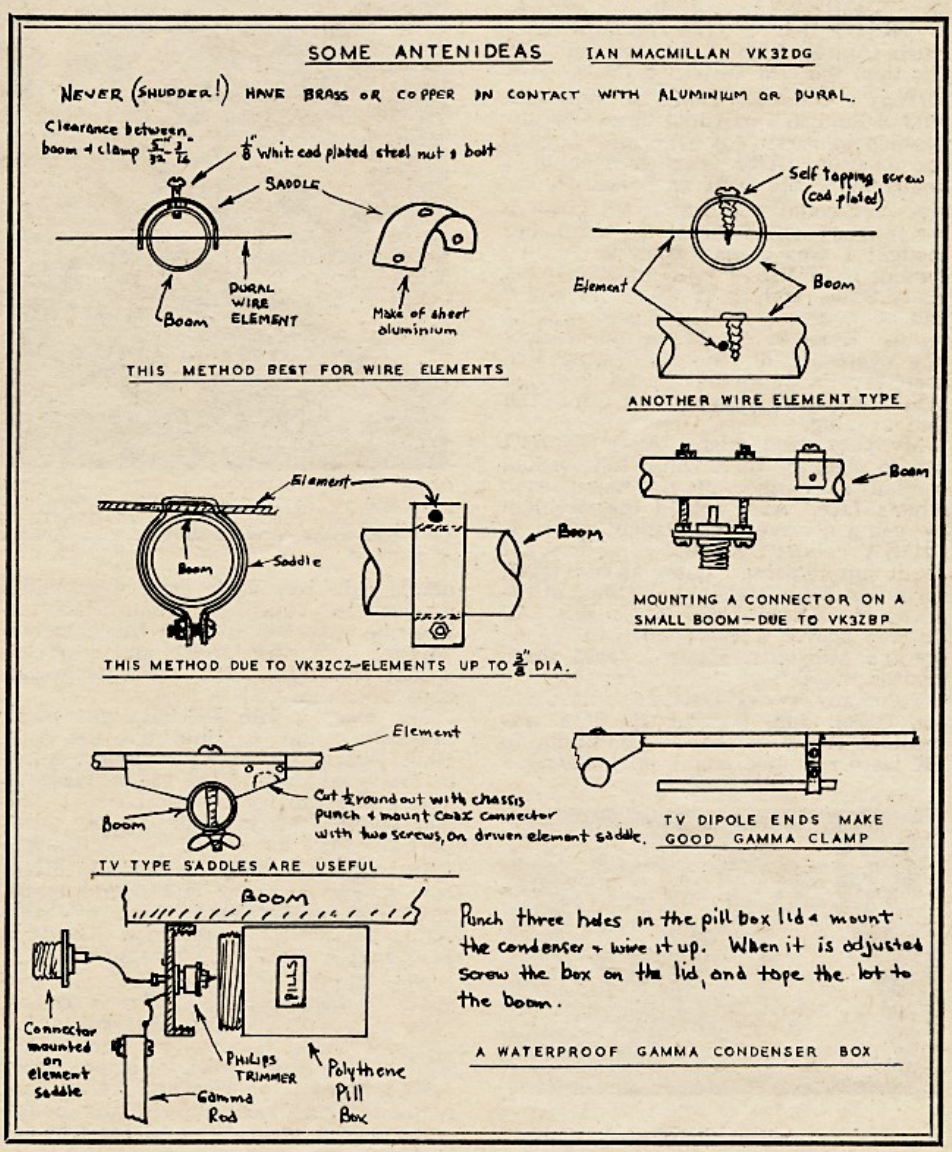
(b) Single battery.



Only a short pulse should be needed if properly made.

This is not a high speed relay, however. ●

"Don't worry about the rope breaking, I've plenty more at home!"



A VK's Comments upon other Countries and their Hams

MOST of us I am sure have a desire to visit overseas lands and meet different people. I have just returned from a most wonderful six months tour of Europe, Scandinavia and the U.S.S.R. As most of my time was spent visiting various DX Hams, I am writing this article for "A.R."

Unfortunately, I am not an author and my words will fail to express what a tremendous and spontaneous welcome I was given. After many years as a DX phone chaser, last April I decided to go and take a look at some of the people whose voices I had heard so many times.

My first encounter with a Ham overseas was with Folke SM5BFA in Stockholm. I had his telephone number and as soon as my train pulled into Stockholm, early on a Sunday morning, I went to a public telephone and called his number. All was not simple when his XYL came on speaking the SM language. After two minutes the call cuts out (a good idea for our public telephones) and as I had no more coins, Mrs. SM5BFA was still in the dark as to VK3TG being in Stockholm. After much trouble I got a further call and this time the OM answered it.

Many of these DX Hams can only talk "Radio English" and find it next to impossible to carry out a normal English conversation. After further trouble I finally made the QTH of Folke.

A king could not have been given a better reception. Folke's two harmonics thought I was a man from the moon, coming from VK. I was taken to meet many SM5s and as it was cold and I had no overcoat, my host came to the rescue. Even in Stockholm one cannot buy overcoats on Sunday (mine had been previously stolen). This overcoat I still wore as my boat left for OH that evening.

My very good friend, Axel OH5NW, was to meet me in Helsinki but we had trouble as neither of us knew each other's face. Axel solved the problem by using a large p.a. system, "This is OH5NW calling VK3TG." This brought about our meeting. Later at his QTH, 70 miles from Helsinki, I was introduced to Carol, his XYL, OH5SM. Finland proved a most delightful country and altogether I spent about three months there.

For many weeks I stayed with Axel and Carol, and most of my time was spent in the Ham shack. Conditions to VK were not good, and I only managed one QSO with VK3UW. Never again shall I complain of QRM here. That European QRM has to be heard to be believed. On my fourth day I visited an OH5 club, and the local press was present. The boy from Australia made front page news next day in the OH5 area. I made many visits to the club in Helsinki. This club exchanges its monthly magazine with "A.R." and I still wonder how the boys in Melbourne understand that Finnish language. A Ham is employed full time to run the club and organise activities. There is a smaller club called the "Columbia Radio Club" (C.R.C.). Each week day the Helsinki Hams gather at the Columbia cafe for lunch, here everything is discussed except Amateur Radio. I was the first VK to visit there and I enjoyed many free meals and received a gift from the C.R.C. of a technical book.

Chris. LA5KG.

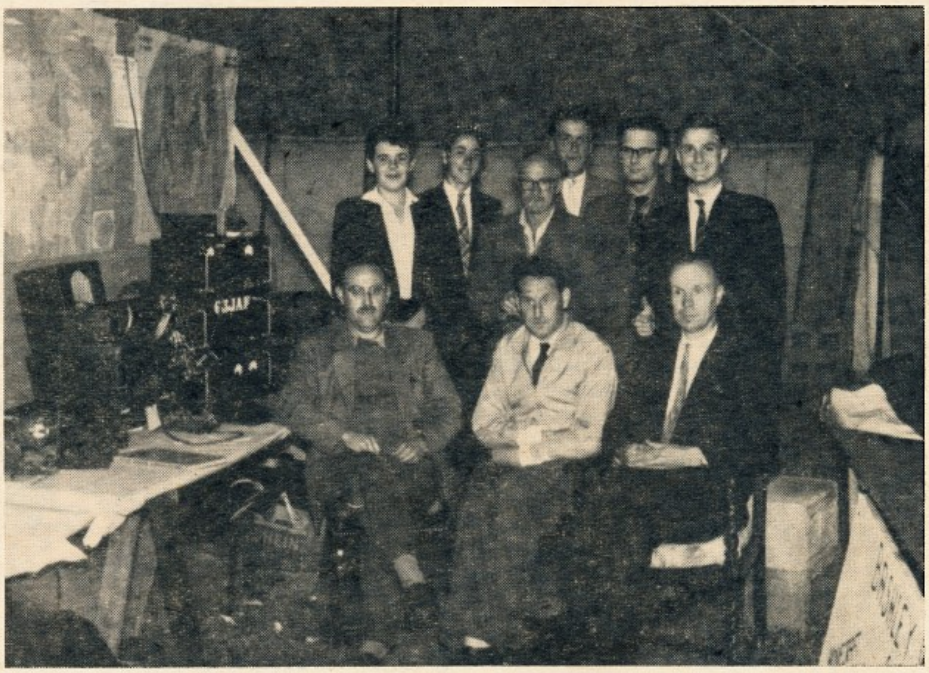
My journey into U.S.S.R. was most interesting, but I could not see any Hams there. Special permission must be obtained from Box 88 in Moscow before one can meet these boys. I had had enough red tape getting my pass port and visa, etc.

In Oslo I was met by Chris LA5KG, his financee and her girl friend made charming companions as we saw the sights on two motor scooters. The two days in LA land were far too short.

Next came England where I met my good friend Art G3JAF (he is called "the man with a tin"). Art got quite a shock when he saw my face after having over fifty QSOs with me. Jack VS6CL was in the area and we all had a night at the local club. Many hours were put in with Art and his friends, perusing war surplus shops in London. Ham gear is very cheap there and I could have filled the ship's hold with bits and pieces if I had the db. and had known a nice custom man in VK. My time in G was all too short and the only DX man I met was G2PU.

In Paris I missed seeing Hams, but my night at the Folies and the walk home after have been censored.

My next host was DJ1CS in Solingen. Verner had a popular make of DJ car and he took me to see the sights and also on a shopping spree—the prices of electrical goods and cameras, etc., are just ridiculous in West Germany. They are one-third the price we pay here.



Members of Lymington and District Radio Club. Front Row (l. to r.): John, Club Sec. and S.w.l.; Jack, VS6CL/G3ODJ; Art, G3JAF. Second Row: Derek, S.w.l.; John, G3LLW; Nick, G3NRH. Back Row: Phillip, S.w.l.; Anthony, S.w.l., 1st harmonic of G3JAF; Ray, S.w.l.

Other Hams whom I contacted and whose call signs I can remember were: SM5CO, OH2MK, OH2XA, OH2YK, OHY2SZ, OH2TM, OH2RJ, OH2GR, OH6TM, OH2OK, OH8QE, OH2MA, OH-5QN, OH5SL, OH5NG, LA3TF, G3LLW, and G3NRH.

In Denmark, Italy and Switzerland I did not make contact with any Hams. Of course I had many weird, wonderful and sometimes frightening experiences. The day in VS1 was most exciting. Being my first look outside Aussie, it brought about many surprises. Five of us from the boat hailed a taxi to take us from the harbour to the heart of Singapore. The Oriental driver drove like a maniac, through the most crazy traffic I had ever seen. Every time we passed a cop he pushed one of the YLs on board out of sight because four is the maximum number of passengers allowed. On arrival at our destination, he asked for fifteen dollars. We all argued with him and were pleased to beat him down to five dol-

lars. Later we found that the correct fare for the trip was one dollar fifty cents.

Another day whilst in UA land, I set out to try and find a shop to buy some post cards. The people in U.S.S.R. are badly off as regards clothes and as I walked along dozens approached me wanting to buy mine. Finally I struck a bargain with one who spoke a little English. If he would show me where to buy post cards, I promised to sell him a few articles cheap. He took me round many streets and lanes and finally ended up in a toilet—this was the post card! A little language trouble again.

As far as the equipment used overseas, I found most tx's to be much the same as ours—home-built with the conventional 807s in nine places out of ten. On the Continent and Scandinavia, commercial rx's seem to take preference. The DLs put out some delightful jobs for about £A70. In G, the disposal rx's such as AR88 and HRO seem to be the order of the day still. Also a great many use commercial beams, whereas on the Continent most are home-built.

Most of the Hams visited complain of the lack of signals from VK over the past few years. My explanation for this was the advent of t.v. here. Also a great many complained about the lack of modulation on VK signals. I also noticed this on the few signals I heard from Aussie, this was very noticeable when compared with that of the ZL chaps.

At the Columbia Club in Helsinki many young Hams used to gather about me and asked about conditions and wages in Australia. It is surprising how many people in those war-torn countries look forward to this land for a brighter future.

Back home after seeing fourteen countries, I am convinced that we down under have a better standard of living than anywhere else and referring to Finland once more in conclusion—Cupid finally landed me a blow there and the OH XYL landed here for Xmas.

—VK3TG.

Addresses of I.A.R.U. Member-Societies

Angola: Liga dos Amadores de Radio de Angola, Henrique Nunes da Costa, Post Office Box 484, Luanda, Angola.

Argentina: Radio Club Argentino, Oscar A. Hermida, Carlos Calvo No. 1424, Buenos Aires, Argentina.

Australia: Wireless Institute of Australia, William T. S. Mitchell, Business Manager, Box 2611W, G.P.O., Melbourne, C.1, Victoria, Australia.

Austria: Oesterreichischer Versuchssenderverband, Dr. Alexander Pacher, Foreign Correspondent, P.O. Box 500, Vienna 50, Austria.

Belgium: Union Belge des Amateurs-Emetteurs, P.O. Box 634, Brussels, Belgium.

Bermuda: Radio Society of Bermuda, A. N. Jones, P.O. Box 275, Hamilton, Bermuda.

Bolivia: Radio Club Boliviano, Imar Mealla Benitez, Secretary, Plaza Venezuela No. 21, Box 2111, La Paz, Bolivia.

Brazil: Liga de Amadores Brasileiros de Radio Emissao, Murilo Constant de Andrade Fraenkel, First Secretary, Caixa Postal 2353, Rio de Janeiro, Brazil.

Burma: Burma Amateur Radio Society, Tara Singh, Secretary, 187 Eden St., Rangoon, Burma.

Canadian Section, A.R.L.: Noel B. Eaton, Canadian Director, R.R.3, Burlington, Ontario, Canada.

Chile: Radio Club de Chile, Luiz M. Desmarez, Secretary, External Relations, Casilla 761, Santiago de Chile.

Colombia: Liga Colombiana de Radio-Aficionados, Alvaro Faccini G., Apartado Postal 584, Bogota, Colombia, S.A.

Congo: Union Congolaise des Amateurs de Radio, N. Legrand, P.O. Box 3748, Elizabethville, Congo.

Costa Rica: Radio Club de Costa Rica, Victor M. Benavides, Jr., Apartado 2412, San Jose, Costa Rica.

Cuba: Radio Club de Cuba, Jorge Smith Deschapelles, Ayestaran No. 629, 20 Pisco, Cerro, La Habana, Cuba.

Denmark: Experimenterende Danske Radioamatorer, Borge Petersen, International Secretary, P.O. Box 335, Aalborg, Denmark.

Dominican Republic: Radio Club Dominicano, Dr. C. E. Regus, Calle Dr. Baez No. 25, Ciudad Trujillo, Dominican Republic.

Ecuador: Guayaquil Radio Club, Oswaldo Trujillo, Secretary, P.O. Box 5757, Guayaquil, Ecuador.

Finland: Soumen Radioamatoorilitto r.y., Valto Mantysalo, Secretary, P.O. Box 306, Helsinki, Finland.

France: Reseau des Emetteurs Francais, Jean-Claude Fouret, Boite Postale 4201, Paris, RP, France.

Germany: Deutscher Amateur Radio Club, Hans Hansen, Secretary, Beseleralle 10, Kiel, Germany.

Guatemala: Club de Radioaficionados de Guatemala, Rodolfo Rosenberg, P.O. Box 115, Guatemala, C.A.

Hong Kong: Hong Kong Amateur Radio Transmitting Society, Maurice H. Duke, Box 541, Hong Kong.

Iceland: Islenzkir Radio Amatorar, Sveinn Gudmundsson, Secretary, P.O. Box 1058, Reykjavik, Iceland.

India: The Amateur Radio Society of India. M. G. Karnik, Secretary, P.O. Box 534, New Delhi, India.

Ireland: Irish Radio Transmitters Society, T. M. O'Connor, Hon. Secretary, 280 Collins Avenue, Whitehall, Dublin, Ireland.

Israel: Israel Amateur Radio Club, J. Itzchaki, Secretary, P.O. Box 4099, Tel-Aviv, Israel.

Italy: Associazione Radiotechnica Italiana, Sergio Pesce, General Secretary, Viale Vittorio Veneto 12, Milano, Italy.

Japan: Japan Amateur Radio League, Takeo Kuwahara, Director Overseas Comm., Box 377, Tokyo, Japan.

Luxembourg: Reseau Luxembourgeois des Amateurs d'Ondes/Courtes, Jos. Kesseler, Secretary, 27, rue d'Amsterdam, Luxembourg.

Malaya: Malayan Amateur Radio Transmitters Society, S. A. Faulkner, Secretary, P.O. Box 777, Kuala Lumpur, Malaya.

Mexico: Liga Mexicana de Radio Experimentadores A.C., Ing. Carlos Arciniega Castaneda, Secretary, Liverpool 195-A, Mexico 6, D.F.

Morocco: Association des Amateurs-Emetteurs du Maroc, Robert Stevens, Hon. Secretary, P.O. Box 2060, Casablanca, Morocco.

Mozambique: Liga dos Radio Emissores de Mozambique, Joao Lapa Valento, General Secretary, P.O. Box 812, Lourenco Marques, Mozambique.

Netherlands: V.E.R.O.N., J. Muls, Hon. Secretary, P.O. Box 9, Amsterdam-C, The Netherlands.

Netherlands Antilles: V.E.R.O.N.A., D. Boon, Secretary, P.O. Box 383, Willemstad, Curacao, Netherlands Antilles.

New Zealand: New Zealand Association of Radio Transmitters, N. F. Leese, General Secretary, P.O. Box 9138, Newmarket, Auckland, S.E.1, New Zealand.

Norway: Norsk Radio Relae Liga, Alfred Maehle, Hon. Secretary, P.O. Box 898, Oslo, Norway.

Panama: Liga Panamena de Radio Aficionados, Rodolfo Delgada, Secretary/Treasurer, Box 1622, Panama, R.P.

Paraguay: Radio Club Paraguayo, Dr. Don Federico Donna, Secretary, Casilla de Correo, 512, Asuncion, Paraguay.

Peru: Radio Club Peruano, Alfredo Correa S., General Secretary, Casilla No. 538, Lima, Peru.

Philippine Islands: Philippine Association for Radio Advancement, Romeo F. Castaneda, Secretary, 67 Espana Extension St., Quezon City, Philippines.

Poland: Polski Zwiazek Krotkofalowcow, Eugeniusz Raczek, Secretary, P.O. Box 320, Warsaw 10, Poland.

Portugal: Rede dos Emissores Portugueses, Sergio Marques, First Secretary, rua de D. Pedro V., No. 7-40, Lisboa, Portugal.

South Africa: South African Radio League, C. C. Ingle, Hon. Secretary, P.O. Box 3911, Capetown, Union of South Africa.

Southern Rhodesia: Radio Society of Southern Rhodesia, Chairman of Council, Box 2377, Causeway, Salisbury, Southern Rhodesia.

Spain: Union de Radioaficionados Espanoles, Miguel Fabregues, General Secretary, Apartado 220, Madrid, Spain.

Sweden: Sveriges Sandare Amatorer, Martin Hoglund, Secretary, Enskede 7, Sweden.

Switzerland: Union Schweiz, Kurzwellen-Amateurde, Serge Perret, International Relations Officer, 26 av. Victor Ruffy, Lausanne, Switzerland.

Syria: Technical Institute of Radio, Gabriel Khouri, Secretary, P.O. Box 35, Damascus, Syria.

United Kingdom: Radio Society of Great Britain, General Secretary, John Clarricoats, New Ruskin House, 28/30 Little Russell St., London, W.C.1, England.

United States: American Radio Relay League, Inc., A. L. Budlong, 38 La Salle Road, West Hartford 7, Connecticut, U.S.A.

Uruguay: Radio Club Uruguayo, Ing. Horacio Acosta y Lara, Secretary, Casilla de Correo, No. 37, Montevideo, Uruguay.

Venezuela: Radio Club Venezolano, Ramon Sahmkow Bustillos, Secretary, P.O. Box 2285, Caracas, Venezuela.

Yugoslavia: Savez Radioamatera Jugoslavije, Svetozar Ribar, Secretary, P.O. Box 324, Belgrade, Yugoslavia.

50 Mc. W.A.S.

Call	Cer. No.	Add. Cntr.	Call	Cer. No.	Add. Cntr.
VK2WJ	13	4	VK2AEZ	10	1
VK3PG	5	3	VK3XA	11	1
VK2VW	9	3	VK3GM	12	1
VK4RY	2	2	VK3ACL	14	1
VK4HR	4	2	VK3ZD	16	1
VK5LC	1	1	VK2HO	17	1
VK6DW	3	1	VK3ZEA	18	1
VK3RR	6	1	VK2ABC	8	
VK3HT	7	1	VK2WH	15	

AWARDS ISSUED BY N.Z.A.R.T.

The New Zealand Association of Radio Transmitters issues the following awards, the rules for which follow the usual pattern for such awards. Applicants must enclose a checking list of the cards forwarded and sufficient currency or I.R.C. for their return postage. Applications should be posted to N.Z.A.R.T., Box 489, Wellington, N.Z., or direct to the Contest and Awards Manager, ZL2GX, 86 Lytton Road, Gisborne, New Zealand.

W.A.P.—"WORKED ALL PACIFIC"

This award is available in Phone/C.w. and Phone only categories. Requires 30 confirmations from:—

CR10—Port. Timor
DU—Philippines
FB8—Adelie Land
FK8—New Caledonia
FO8—Fr. Oceania
FW8—Wallis Island
FU8/YJ—New Hebr.
KB6—Baker, Howland, etc.
KC8—Carolines
KC6—Palau (West Car.)
KG6—Marianas
KG6I—Iwo Jima
KG6—Marcus Is.
KH6—Hawaiian Is.
KJ6—Johnston Is.
KM6—Midway Is.
KP6—Palmyra Is.
KS6—Samoa
KW6—Wake Is.
KX6—Marshall Is.
PK1, 2, 3—Java
PK4—Sumatra
PK5—Borneo
PK6—Celebes, etc.
JZ0—Neth. New Guinea
VK—Australia
VK2—Lord Howe Is.
VK4—Willis Is.
VK0—Macquarie Is.
VK9—New Guinea
VK9—Norfolk Is.
VK9—Papua
VK9—Nauru
VK9—Christmas Is.
VK9—Cocos Is.
VR1—Gilbert Is.
VR1—Ellice Is.
VR1—Br. Phoenix Is.
VR2—Fiji
VR3—Fanning Is.
VR4—Solomon Is.
VR5—Tonga
VR6—Pitcairn Is.
VS4—Sarawak
VS5—Brunei
ZC5—Br. N. Borneo
ZK1—Nth. Cook Is.
ZK1—Sth. Cook Is.
ZK2—Niue
ZL—New Zealand
ZL1—Kermadec Is.
ZL3—Chatham Is.
ZL4—Auckland Is.
ZL5—N.Z. Antarctica
ZM6—British Samoa
ZM7—Tokelau Is.

W.A.Z.L.—"WORKED ALL NEW ZEALAND"

Requires 35 different Branches of N.Z.A.R.T. from the following:—

01—Ashburton
02—Auckland
03—West.Suburbs
04—Cabridge
05—Christchurch
06—Dannevirke
07—Dunedin West
08—East Southland
09—Egmont
10—Franklin
11—Gisborne
12—Hamilton
13—Hastings
14—Hawera
15—Central H.B.
16—Horowhenua
17—Huntly
18—Hutt Valley
19—Inglewood
20—Manawatu
21—Manukau
22—Marlborough
23—Marton
24—Motueka
25—Napier
26—Nelson
27—New Plymouth
28—Northland
29—North Shore
30—Otago
31—Pahiatua
32—Rahotu Coastal
33—Rotorua
34—Sth. Canterbury
35—South Otago
36—South Westland
37—Southland
38—Taumaranui
39—Tauranga
40—Te Awamutu
41—Thames Valley
42—Titahi Bay
43—Waihi
44—Waikato East
45—Waimarino
46—Wairarapa
47—Waitara
48—Wanganui
49—Westland
50—Wellington
51—Whakatane
52—Wairoa
53—Te Puke
54—Patea
55—Waitomo
56—Hornby
57—Tokoroa
58—Helensville
59—Mangakino
60—Taupo
61—Central Otago
62—Reefton
63—Upper Hutt

Special endorsement if all contacts were made on 80 metres.

W.A.D.—"WORKED ALL DISTRICTS—ZL"

A v.h.f. award requiring confirmation of QSO with ZL1, ZL2, ZL3 and ZL4 on a v.h.f. band —50 Mc. or higher.

N.Z.A.—"NEW ZEALAND AWARD"

Requires the following:—

35 confirmations from ZL1,
Plus 35 confirmations from ZL2,
„ 20 confirmations from ZL3,
„ 10 confirmations from ZL4,
„ 1 confirmation from a ZL territory (from N.Z. Antarctica or Chatham Is. or Kermadec Is. or Campbell Is.). This one confirmation may be substituted by 20 extra ordinary ZL confirmations if desired.

Making a total of 101 confirmations.

Special endorsement if all contacts on 80 metres.

24th B.E.R.U. CONTEST

Radio Amateurs throughout the British Commonwealth and Empire are invited to take part in the Twenty-Fourth B.E.R.U. Contest to be held on **11th and 12th March, 1961.**

The Contest Committee is again arranging to secure the maximum amount of overseas publicity but solicits the assistance of members in bringing the dates and rules to the notice of all operators.

RULES

1. **Sections.**—The Contest is divided into two sections: (a) High Power—maximum licensed power; (b) Low Power—maximum input 25 watts.

1. **Duration.**—The Contest (both Sections) will start at 0001 G.M.T. on Saturday, March 11, and end at 2359 G.M.T. on Sunday, March 12, 1961.

3. **Eligible Entrants.**—The Contest is open to all fully paid-up corporate members of the R.S.G.B. resident within the United Kingdom and to all British subjects outside the U.K. but within the British Commonwealth and British Mandated Territories. All entrants agree to be bound by the rules of the Contest.

4. **Operator.**—Only the entrant will be permitted to operate his station for the duration of the Contest.

5. **Entries** must be set out as follows: Date, Band (Mc.), Time (G.M.T.), Call Sign of Station Worked, My Report on His Signals, His Report on My Signals, Leave Blank Column, Bonus Points, Points claimed; Total is obtained by adding Points Claimed to Bonus Points. Entries must be on one side only of foolscap paper and must be postmarked not later than April 1, 1961, and must be addressed to the Contest Committee, Radio Society of Great Britain, 28/30 Little Russell St., London, W.C.1, England.

On the first sheet should be shown: Claimed Score, Section (high or low power), Name, Call Sign, Address, the transmitter, power input, receiver, and Aerial(s). Also the usual declaration, date and signature.

6. **Bands.**—Operation is restricted to the following bands: 3.5, 7, 14, 21 and 28 Mc. Transmission must be of Type A1 (pure c.w.) only, and frequent tone reports of T8 or less may result in disqualification.

7. **Licence Conditions and Power Input.**—Entrants must operate within the terms of their licences. The input to the valve, or valves, delivering power to the aerial must not exceed 25 watts in the low power section.

8. **Contacts** may be made with any station using a British Commonwealth call sign except within the extrant's own call area. British Isles stations may not work each other for points. Contacts with unlicensed stations will not count for points. The decision as to whether or not a contact is valid will rest with the R.S.G.B. Contest Committee. Only one contact on each band with a specific station will count for points. Duplicate contacts should be logged, but no points claimed.

9. **Scoring.**—Each completed contact will score 5 points. In addition, a bonus of 20 may be claimed for the first contact with each new Commonwealth call area on each band. All British Isles stations (G, GC, GD, GI, GM and GW) count as only one call area.

10. **Contest Exchanges.**—Serial numbers must be exchanged and acknowledged before a contact can count for points. The serial number of six figures will be made up of the RST report plus three figures starting with 001 for the first contact and increasing by one for each successive contact.

11. **Awards.**—At the discretion of the Council, a trophy or miniature will be awarded to the winner of each Section, and certificates will be awarded to the first three entrants in each Section. In addition a certificate will be awarded to the leading entrant in each call area regardless of the number of entrants in his call area provided that his score exceeds 1,500 points in the High Power Section or 750 points in the Low Power Section. A certificate will be awarded in each call area in which there are ten or more entrants to the runner-up, provided his score exceeds 1,500 points in the High Power Section or 750 points in the Low Power Section.

RECEIVING SECTION

A Receiving Section is to be held in conjunction with the Transmitting Sections. Similar rules apply for the Receiving Section. Logs to contain the following columns: Date/Time (in G.M.T.), Call Sign of Station Heard, Report and Serial Number sent by Station Heard, Call Sign of the Station being Worked, Band in Mc., Bonus Points Claimed, Points Claimed. CQ or Test calls will not count for points.

Scoring: Each complete log entry will score 5 points, in addition a bonus of 20 may be claimed for the first station heard in each new Commonwealth call area on each band. A station may be logged only once on each band for the purpose of scoring. Where both stations in a contact are heard, they should be logged separately.; points may be claimed for both entries.

★

VK9 QSL SERVICE

The official W.I.A. QSL Service for Papua-New Guinea terminated with the closure of the Division early in 1960. However, a large volume of incoming cards is still being received at Box 204, Port Moresby and it has been decided to retain the post box for a further period.

The Rabaul Amateur Radio Club is also handling incoming QSLs and it is suggested that all cards for the Rabaul area be forwarded direct to that Club care of Post Office, Rabaul.

A carry-over of cards from the W.I.A. Bureau includes QSO confirmations for the following stations:

VKs 9SK, 9MP, 9PK, 9MT, 9BI, 9CT, 9TJ, 9AM, 9PC, 9AO, 9XR, 9CS, 9BF, 9VJ, 9NQ, 9PZ, 9VK, 9RW, 9DC, 9CT, 9RA, 9BT, 9LA, 9RB, 9AF, 9BV, 9GT, 9EJ, 9CD, 9VW, 9PH, 9CC, 9SM.

All claims for the above cards should be addressed to Box 204, Port Moresby, and should include one Reply Coupon. Cards not claimed within three months will be destroyed.—VK9XK.

CQ DX, CQ DX, CQ DX

This call goes forth night after night and is oft-times of no avail, there being no reply, so what are the chances of receiving a reply? The following countries have less than fifty Amateur stations and they have to serve the quarter of a million Amateurs in the leading eleven Amateur nations. Remember that when you may laugh at those who seek DXCC. (Perhaps you cannot work a hundred countries, but you must admit it does take a lot of effort and patience.)

These countries are members of the fifty and under group: AC3, 4, 5; AP, CE9, CE0, CN2, CR4, 5, 6, 8, 9 and 10; CS3, CT2, 3; EA6, 8, 9, 0; ET2, 3; FB8, FD4, FE8, FF8, FG7, FK8, FI8, FM8, IS, I5, JY, KB6, KC4, 6; KG1, 4, 6; KJ6, KM6, KP6, KS6, KV4, KW6, KX6, LX, LZ, MI, MP4, OD5, OH0, OX, OY, PJ, PJ2M, PX, PZ, ST, SU, SV, TA, TF, TI9, VK9, VK0, VP1, 2, 3, 4, 5, 6, 7, 8, 9; VQ1, 3, 5, 6, 8; VR1, 2, 3, 6; VS1, 4, 5, 6, 9; XV, XW8, XZ, YI, YJ, YK, YO, YS, ZB1, 2; ZC5, ZD1, 2, 3, 6, 7, 8; ZK1, 2; ZM, ZS3, ZS7, 8, 9; 3A2, 3V8, 8J, 9G1, 9K2, and 9M2.

V H F

David Tanner, VK3ZAT
C/o. British Nylon Spinners,
Bayswater, Victoria.

Once again Christmas has come and gone, and brought the usual increase in v.h.f. activity. One of the most unusual highlights was a cross-band contact on 6 and 2 mx between 6ZCB and 5KK which took place on the evening of Jan. 3. Six metres was open to the Eastern States from the West and at the same time, the Melbourne gang were working VK5 on 2 mx. A look at the weather map seems to indicate that the VK5-VK6 2 mx path was caused by atmospheric ducting across the Bight, not by Sporadic E.

George KR6CR states that he will be active on 6 mx from mid Jan,. whilst KR6RB and KR6IF are currently operating in Okinawa.

Kel 3ZFQ at present portable at Alice Springs is having a very thin time of it, as 6 mx openings have been practically non-existent all over VK since the first couple of days of Jan. This has been the poorest season we have had on 6 mx for some years, quite a few instances of fairly short skip have indicated good E layer ionisation.—3ZAT.

NEW SOUTH WALES

General.—Firstly, an apology for last month. The absence of notes was entirely due to your scribe, who forgot that December was the month for the copy to be in early, and only woke up to this fact when it was too late.

This month has been quiet as far as organised activity is concerned. However, 50 Mc. DX has been quite good. Recent openings included VK5 and VK7 on New Year's Day. The previous month was filled to capacity. It started with the annual auction night of the V.h.f. and T.v. Group, this being a particularly well attended event. Jim 2PM, as auctioneer, did a worth job and sold almost everything—value of goods ran into three figures. One man's food is another man's poison—it's amazing what is useless to one is just the thing someone else has been wanting and could not obtain.

The night fox hunt on 17th Dec. was also the Christmas party, with supper at the home of Chairman 2OA. As usual, Bob really turned it on. The Merry Christmas Scramble on the following evening drew over 30 stations, including John 2WJ who has not been heard from this QTH for years.

The most recent event was a points per mile field day on New Year's Day, when 20 station took part. No good DX was reported, and it is too early to give results yet. The longest contact was 120 miles (2HL to 2ZAV at Mt. Panorama).

Three reports have come in lately. The first is from Darrell 2ZLP at Armidale, who is running 40w. to an 829B on 50 Mc. with a 3 el. yagi. Darrell has worked KH6, JAs by the dozen, also VK3, 4, 5, and 7—all in the last few months. He sent along an interesting cutting from his local newspaper reporting 76 Mc. interference to local f.m. services from VK7 on Nov. 14.

The second report is from Stuart 2ZDF in Newcastle, who listed Channel 2 interference from VK3, 5 and 7, also on Nov. 14. This must have been quite a night.

The third note came from Ron 2ZRF on Lord Howe Island. Ron is well on the way to putting out sigs. on 50 Mc. However, he has been delayed by an addition to the family.

50 Mc.: No JAs reported lately in Sydney, but Dick 2ZCF worked two ZL1 stations on Dec. 31. Jan. 1 gave an opening to VK5 and VK7, with quite a few Sydney boys sharing in the fun. As this was also the 144 Mc. F.D. several who had 50 Mc. gear with them made contacts from field locations. The Ross Hull Contest has helped activity on this band, and the top score to date is over the century.

A visit to Sydney by 4ZBE a short while ago was an eye opener to those who talked with him. Bill lives in a DX paradise and has worked stations all over the Pacific area!

144 Mc.: Activity has been much as usual as reported elsewhere. An interesting trend is the use of portable long yagis for field work. They certainly pay off in signal strength. A visit by your scribe to Jock 3CS, ex-3ZDG, revealed s.s.b. equipment for v.h.f. How about some takers in VK2? The gear is not complex and the advantages are well known. Jock has written several articles on the subject to clarify the situation and rouse up some enthusiasm. —2ZAG.

VICTORIA

50 Mc.: The level of activity has been quite high on this band over the holiday period with plenty of Interstate break-throughs. 3ZCG had VK2, 4 and 6ZBY around midday on Dec. 20, whilst general openings to VK2 and VK4 occurred on 26th and 27th. Russ 9XK popped in on Dec. 27 about 1130 E.A.S.T. when 3CI, 3QV, 3ZHF caught him. Jock 3CS worked him later at about 1400.

Apparently the temperature inversion on Dec. 25 that brought VK7 to Melbourne on 144 Mc. was responsible for 3ZL being 5 x 9 plus at 3ZKJ and the fine signal from Bill 3ZFG Warrnambool coming into Melbourne also on 50 Mc.

Conditions were patchy between Christmas and New Year, but Jan. 1 produced VK2, 4, 5 and 6 with some VK3 back scatter between 3CS and 3ZCW. Weak signals were heard on Jan. 2 but Jan. 3 was again lively with VK2, 4 and 6. New calls about the band include 3ZIL, 3ZJV, 3ZKK and 3ZKW, whilst Ted 3ZFJ has started up from his new QTH at Chadstone. 3ZEO is a bit quiet; apparently working a VW—new one on me, can't find it in the "A.R." countries list. Peter 3ZDO and others do modulate, try slope detection.

144 Mc.: Things started out well for Dec. when Howard 3ZJY heard 2DU at Deniliquin at 1905 hrs. on the 1st. Unfortunately no contact was made and Noel's sig. has not been reported since. Conditions fair on Dec. 8 when 3QV (Melbourne) worked 3ASS at East Sale. 3QV found copy much better on c.w., there should be more use made of it.

3ZER, both at home in Ballarat and portable at Mt. Buninyong, did well with 3NN, 3ZEA, 5AW and 5ZCR on Dec. 22, whilst he worked 7PF and 7LZ on 25th and 7PF again on 26th. 7LZ was worked by 3RK and 3YR on 25th and by 3ABK on 26th. To date though VK7 do not appear to be as good as previous years. (The gear in Melbourne is not what it used to be.—3ZAT.)

Bill 3ARZ, who has over 400 contacts in the Ross Hull Contest, has worked 5AW several times both in evenings and early morning. He has also QSO'd 3ASW and 3ZDP at Sale on Dec. 22. 3ZCG made the grade with 5AW as well as 3ANQ, 3ZER and 3DY at Maffra on Dec. 23. George also worked 7LZ whilst portable at Bass Hill on Dec. 25.

The scramble on Dec. 11 attracted 20 starters and Michael 3ZEO was the winner with 14 points with Tom 3ZHT second with 13 pts.

New stations on include Ron 3OM, Peter 3AWA, Ron 3ZBF, Ian 3ZFU and Matt 3ZKR. Wlecome to 2 metres chaps.

288 Mc.: Perhaps one of the unluckiest persons about is Ron 3ZER. Operating portable from Mt. Buninyong on Dec. 25, he heard 7LZ at 5 x 5. However, Col, whilst hearing the signal, could not read the audio. If the QSO had been made it would have broken the 7LZ-3ALZ Australian record by some 30 miles. There was some consolation for Ron as early on the morning of Dec. 26 he worked 5AW at Penola 5 x 9 both ways for a new VK5 record of 185 miles. David and Ron are now thinking of trying 576 Mc.

George 3ZCG has his 15 el. yagis up but bemoans the lack of activity. Jock 3CS with a new 50 ft. tower is also putting the 1 mx gear to work again.

V.h.f. Group: The last meeting for 1960 was not particularly well attended but much general discussion took place with our temporary admin. sec. Peter 3ZDO (boy, can she—sorry—he type) talking on n.b.f.m. using a 1N1763 of all things. John 3ZLO described some of his station equipment which was on display and David 3QV confused everyone including himself with problems involving reception of upper and lower sideband.—3QV.

SOUTH AUSTRALIA

50 Mc.: The band really came to life in Dec. when openings occurred nearly every day. In fact the VK6 beacon, VK6VF, was audible on several occasions when no contacts were made because of inactivity.

The Ross Hull Contest is now in full swing but activity in most States seems to be down compared with last year. On Dec. 3, the band was open to VK2 (1100 hrs. S.A.T.), VK6 (1300 hrs.), ZL (1800 hrs.), VK7 (2000 hrs.). This was the only ZL opening and compared with last year was very poor.

JAs have been very scarce during the month, but Mick 5ZDR managed to work one on the morning of Dec. 24. The best openings occurred to VK6 and on the 24th the band was open to VK6 for at least five hours with quite solid sigs. On 27th and 28th, the band opened to VK9 and Russ 9XK and 9ZGW were heard. Russ was worked by a few but 9ZGW was not. Unfortunately no sign of VK8. Garry 5ZFM, Mick 5ZDR and George 5GG have been the most active stations this month, exchanging several numbers in the Contest.

V.h.f. Group activity this month embraced one of the best fox hunts held to date with 14 cars participating. Results were as follows: 6 mx first event, Eugene 5AV; second event, Garry 5ZFM; third event, Graham 5ZAP. 2 mx: Keith 5MT won the first and third events for both 6 and 2. Ron 5MK was the fox and he invited all participants back to his QTH for supper provided by his XYL Joan, which was very much appreciated by all.

Mobile activity has been quite good of late with Mick 5ZDR and Ron 5MK working DX from their cars. Neil 5ZAW has been out mobile quite often also. Gilbert 5GX and Vic. 5JH have been out portable on the week-ends with Gilbert working his share of the DX. The 4th turned out to be an unofficial field day with Laurie 4ZBL/5 and your scribe 5BQ at Mt. Lofty working Stuart 5ZDG mobile at Clarendon and Vic. 5JM mobile on the Mt. Barker Road. Half an hour later John 5ZCJ was contacted mobile at Pt. Noorlunga. Then Mick 5ZDR mobile in the city was worked by those at Mt. Lofty.

Dave 4ZAX is back in VK4 on vacation and heard working DX from his old QTH. Gerry 5ZFM is portable at his summer residence in Gooliva with the filaments always hot.

144 Mc.: The most important news this month is the fact that Stuart 5ZDG will be taking up permanent residence in Whyalla and he intends to run about 80-100w. on 2. At last Adelaide will have an active 2 mx station in the country and Stuart should have contacts very regularly. Mick 5ZDR has been on 2 building up a score for the 2 mx section of the Contest and quite likely David 5AW and Al 5ZCR in the south-east have been doing the same.

288 Mc.: George 5GG, Brian 5TN and some of the newer chaps have been on 1 mx exchanging serial numbers for Intrastate contacts. David 5AW has had the only Interstate contacts with 3ZER.—5BQ.

TASMANIA

The V.h.f. Group of the Tasmanian Division continues to function well, holding meetings on the third Wednesday of each month, in the W.I.A. rooms. Recent lecturers have included Len 7LE and Paul 7ZAS. Paul spoke to us about Radiophysics. The Sunday morning W.I.A. new broadcast continues to be retransmitted by Alan 7MY on 50.88 and 144.27 megacycles.

Plans have been arranged for the "Athol Johnson Memorial Contest" to be held on the last two week-ends of Feb. 17 and 18 and Feb. 24 and 25. This is designed to encourage mobile and portable operation within the State. Although Interstate contacts do not count for points, the increased activity hoped for may make it worth the attention of mainlanders. A point is scored for every mile worked; a number, consisting of a signal report plus reference, must be exchanged. The same station may be reworked after five hours or by either station moving at least five miles.

50 Mc.: Local activity on this band is greater than this time last year, at least nine stations are active from the Hobart area. Mobiles include 7ZAI, 7ZAL and 7ZAO. Barry 7ZAK and Geoff 7ZAS should now be active on 50 Mc., both have had rx's working well and tx on the way. Paul 7ZAJ is putting a better signal northwards with a higher aerial and improved modulation system.

Openings during the latter part of Nov. were quite good, 14th provided VK2, 3 and 4, with patchy openings to VK4 later on in month. Dec. 1 brought an opening to VK2 and 3, 3ZKJ in Melbourne was worked by 7ZAO—working Melbourne is rather a rare occurrence from Hobart. Dec. 3 provided a good all-day opening to VK2, 3, 4 and 5. Things were relatively quiet until the 24th when VK2, 4 and 5 appeared; during the next three days the same call areas were worked.

No more VK3s appeared and no sigs from VK6 or VK9—but we are still hoping. Various ZL stations were heard by David 7ZAI but as yet none worked. Stations active in the south during this period were 7MY, 7ZAX, 7ZAC, 7ZAL, 7ZAJ, 7ZAQ and 7ZAO.

144 Mc.: Activity on 2 mx is rather low at present, but better things are hoped for as a number of stations have indicated their intentions of constructing gear for this band.

288 Mc.: This band is providing consistent local contacts. No one has yet produced workable crystal controlled gear, modulated oscillators still hold force. Hobart's hills have provided barriers which take some beating. Reflections from Mt. Wellington provide a path when all else fails. A newcomer to this band is Brian 7ZBE.—7ZAO.

S W L

Maurice Cox, WIA-L3055
Flat 1, 37 Boyd Crescent,
Olympic Village, Heidelberg,
N.23, Victoria.

As I am writing these notes on 2/1/61, listening to all the 6 mx DX I am wondering if all VK S.w.l. are taking part in the Ross Hull Memorial Contest—I hope so.

It is my first R.H. Contest and am enjoying it quite well. Mac Hilliard lent me his v.h.f. rx—28 to 100 Mc. for which I thank him. It is amazing what you can hear when the DX comes in. I put up a 6 mx dipole but it's not a patch on my W0WO all-band antenna. So if the DX is there you can hear them on anything. To date I have 203 pts.—VKs 6, 4, 2, 5 and one lone 9. Anyhow, we of the VK3 Group wish you all the best for the Contest.

By the time you all read these notes, the first VK S.w.l. Convention will have taken place. Next month I'll tell you all about it.

In this year all VK S.w.l. office-bearers would like to see as many as possible come along to the Group meetings. Try and make your Group a big success, hop in and help as much as possible.

VK GROUP NEWS

VK3: Last meeting held was attended by a dozen or so. General business, etc., was short and sweet. We then had a general discussion amongst ourselves. Mike Owen happened along and we had a peak into the tx room which, up to date, looks quite good. The organising committee will have their backs bent this year to make it one of the most successful. So here's hoping you will all turn up to the meetings and visits.

VK2: No news at all.

VK4: Have had letters from s.w.l's. which are under Correspondence.

VK5: Nothing to date. Colin must be on holidays.

VK6: Have had nothing for quite some time. We hope all is well over there and the Group is expanding. Hope to hear from you soon.

VK7: From Mike Jenner. He has passed his A.O.C.P.—congrats. Mike. The S.w.l's. went on a tx hunt and they piled into a car with a Command set plus a loop which went crazy and they got bushed, but they had a lot of fun. Their last meeting was on conversion of surplus gear. What did you learn, you guys?

Yes, I would like to hear from any of you Taswegians re your gear and a photo for this page. Thanks for the list. Mike ends his letter by saying I quote: "So until next time your very tired and under-worked servant." And in a P.S. he says he likes a lot of correspondence, but doesn't get any. Now, you lads, write him with information or queries, give him some work to do.

CORRESPONDENCE

I have received correspondence from Don Grantley, Eric Trebilcock, Les Salter, Charles Thorpe, Leigh Banks, Harry Major, Neville Fisher and Chas. Aberneathy.

Don Grantley reports the following: He had a letter from the hard working QSL manger, Jim W2CTN and he refers to s.w.l's. and QSL cards and says he gets bundles containing hundreds of s.w.l. reports through the Bureau and at times he finds the going tough, therefore, preference has to be given to cards sent direct to him at his home QTH. Any s.w.l. having reports for any station under the control of Jim can forward them to L3088, Box 145, Albury. Don is in touch with him at frequent intervals. Don has heard 206, 65 confirmed, 32 U.S.A. States confirmed, 41 heard on s.s.b. Total cards received 398 and number of reports sent 1982—this is since 1957. His three rarest are VS4JT on s.s.b., ZB2I on c.w. and YA1AO on c.w. He has sent more in the last six months than any other period.

Due to Mac Hilliard's generosity Don was able to enter the Ross Hull Contest. (Yeah, me too, Don). Our thanks to you Mac for lending us the gear. His new rx which I think is an R1155, should by now be in operation.

Congrats. to M. Richards of the Albury Club for his fine effort in his first R.D. Contest.

When Don returned home from Melbourne he found his antenna down, but has now put up a 20 mx vee boom of sorts. This one gives coverage from any direction on all bands from 20 to 10 mx and even works on 6 mx. Thanks Don for the information.

Eric Trebilcock. He's back at Essendon Aerodrome working shifts again for a while. He did a trip to the Geelong Amateur Club not so long ago where he spoke for 75 mins. (what a marathon Eric, I thought rag chewers on 40 were bad enough). He says he enjoyed meeting Amateurs and S.w.l's.—young and old.

Les Salter, of Kingaroy (VK4XS). He read Don's article in Sept. "A.R." '60 re the two el. beam and wrote me for details. (It should be up now, Les.) How's the DX from it? He's been off the air for 12 months and is trying to make a come-back. Well, Les, I hope it works out well for you. Let's know how you find it, will you?

Charles Thorpe, of VK4 land. He's not only won one of our S.w.l. Contests, but received another certificate the other day, first in VK in the R.S.G.B. 21-28 Mc. phone contest '59; 22nd in the overseas position . Congrats. Chas., will send you up your certificate as soon as possible for the Contest run last year. I wonder if we run another how many entries we would get. Fine on your scores for the DX ladder. Thanks for the pat on the back re the notes.

Leigh Banks writes me again and hopes to take an active interest in activities of s.w.l. in the near future. Leigh is only a very new member. We will look to seeing and helping you in any way, Leigh.

Harry Major writes me a long letter and it is very interesting and I am going to quote some of his letter. "One thing came to my mind over the week-end reading the Dec. issue of "A.R." in the appeal of the Federal Executive in the Editorial for increasing membership. I am the trade supervisor at the Collingwood Tech. School and we have a Radio and Elec. Club among the boys, conducted each week. Each month I write a radio article for the club and have lent them some of my gear and they are interested. I feel if we could interest these boys more we could possibly provide many more prospective members for our clubs and the Institute. So far I have not done anything along s.w. lines, but intend to do so next year. The club master is one of our electrical and electronics teachers, although not a radio man, but together we have done something to interest the boys and several have built crystal and transistor sets.

"One great difficulty is the cost of parts for suitable sets for s.w. listening. I feel if "A.R." could publish some simple type of s.w. set suitable for juniors to get a taste of s.w.l'ing it would do much to create greater interest. Equipment with two or three valves and with easy-to-make coils, etc., would be the type and these could be built during club meetings. We older listeners often forget that the younger generation have never had many of the earlier thrills we had years ago with simple and easy to make equipment; now we have a chance to help them. I hope this idea may be of some help and if anything can be done, I will help to push it along."

Many thanks Harry and I personally will do all I can to get help for the boys and that goes for anywhere in VK land. More from Harry next month.

From Oatlands—VK7. Neville Fisher wrote (for the first time) that after reading "A.R." and noting no VK7 s.w.l. scores in the DX ladder, he'd let me know his small score and give me a run down on his gear, which is as follows: A centre fed dipole for 7 Mc., 20 ft. high, an EF50 preamp. and a 12-tube double conversion rx h.b. which covers 3.5, 7, 14 and 28 (what about 21 Neville? The best of the Amateur band). He has just bought himself a full size 3 el. beam for 14 Mc. and is at present replacing the 7 Mc. dipole with a new higher 40 ft. folded dipole. Neville, like other s.w.l's. is looking forward to the forthcoming R.D. Contest. Thanks Neville, hope to hear from you again.

From my old pal, Chas. Aberneathy. I know his age, but am not letting on; would like to know the name of his XYL. His son, Robert, 22, is 2ZDA and is getting spliced soon (another good man gone west!!). All the very best for the future to you and your YL, Robert.

Just shows you how one can get excited on 6 mx. Chas. told me he had sent a report to 3ZGD but in fact it was 3ZGA, his first 50 Mc. s.w.l. report, and has now got over the excitement and his list of 6 mx has gone ahead at a very fast rate.

ODDITIES

Ron Young built a 40 mx mobile converter for his bomb, but it only works on 20 mx. These b.c. coils aren't much good are they Ron?

Haven't seen Frosty at the meetings since he won his contest cup. But he's a busy boy what with his band and guitar playing!! Mac has been touring around Interstate of Xmas with his 6 mx mobile. A thousand new type report forms will be available soon. Have not seen Mike Ide or Peter Neilsen of late, must be the Riley Club which has bitten him.

Len Poynter, 3ZGP-L3001, has no rx and has missed all the 6 mx DX. Haven't heard from Graham Ruttig for some time. John Donald and Clarrie Walker are conspicuous by their absence. Soon I'll include a s.w.l. report in these notes the way I think it should be done.

BAND CONDITIONS AND DX HEARD

Eric didn't give his impressions of the band, but has heard on 20 mx c.w. the following: VR1B, SM5KV/9Q5, MP4QAQ, EA8BW, FL8ZA, MP4QAR, KW6CB, VS1KQ, ZS1RM, MP4BDE, MP4BCV, OD5AI, ZC4AK.

Don says mainly the Pacific can be heard and plenty of it, and has heard 6O1MT, ST-2AR, W8OLJ/PK, UL7KDW and 9N1MM (on phone) and ET2US c.w. He reckons all bands are on the mend.

I myself say 20 has had some good days and I think it will get better. I have heard VQ4RF, SV0WO, I1GH, W6s, ZLs, EP1AD, G8PO, VK-0ED, 9N1MM, KG6AJB, JA6MW, VR1G, XE-1JP, OD5AI, MP4TAC, 5A5TA,, on s.s.b. DJ-1BZ, CN8AR, ZS6OY, ZS5QV, VQ4RF, MP-4BBW, HL9KL, 4X4FA, CR9AH, VS6AE, KP-4AZ, VQ4RF, CT2AH, SV1AE, HZ1AB, EP2AG, ZC4AK. So 20 has had its ups and downs, but mainly up and is on the improve.

15 Mx. This last week 15 has been really good to Europe, has been peaking to Asia and Europe at 2300 E.A.S.T. Don has heard CR-9AI, I1CCM, DL1VX plus all Oceania.

I myself have heard 4X4AV, G3JAF, ZC4MO, DL1AP, SP9SP, SP7AX, I1CCM, CR9AI, DJ-2OB, 9M2EW, F2FI, CO2BB, HM1AE, VA1AB, CR6LA, OD5CW, YU1KC, CP1CI.

10 Mx. Nothing other than KG6IQ, KA8LF, W6BHM, I1DSM and UA0DZL. That's it for this month. I would appreciate boys, if you could write what you have heard, say from the 30th of the month to the 30th of the next month, what you've heard on each band and your impressions of band conditions, but let me have them by the 1st of each month. Thank you.

QSL CARDS RECEIVED

Eric Trebilcock has received cards from: VQ1SC,. ZL4JF, TI2CMF, YS1O, KP4AEQ, VS-1FZ, LU5AO, YO8KAE.

Don Grantley has received cards from: ZB-2I, JZ0HA, CN2BK, W2CTN, VK9GK and VR2DK.

Chas. Aberneathy, 50 Mc. cards to hand: VK-3ZIR, 4NG, 7ZAO and 7ZOQ. On l.f., W0SVV.

Would like to know in future what cards you have received each month.

73 and good DX, Maurice L3055.

DX LADDER

		Con-firm.	Hrd.	Zon. Conf.	No.of Cards
L3042	Eric Trebilcock	258	275	40	6577
	Rod de Balfour ..	122	180	—	—
VK4	C. Thorpe	85	137	34	—
L2022	D. Grantley	66	214	34	398
L3074	Mac. Hilliard	53	194	24	—
L3055	M. Cox	29	194	18	80
L3015	M. Ide	28	86	—	—
L3065	I. Thomas	16	126	13	30
L3072	T. Heywood	12	80	11	16
L2211	C. Aberneathy	13	31	4	—
L5031	C. Hutchesson	5	96	5	—
L3088	D. Grantley	4	103	—	—
L5020	F. Aslin	4	40	4	—
L2057	R. Wood	3	3	3	3
L2159	R. Thompson	2	73	2	—
L2052	T. Mills	2	14	2	—
L3006	I. Woodman	1	4	1	—
L5026	G. Smythe	1	26	1	—
L7013	N. Fisher	—	22	—	—
L2185	A. Chatto	—	79	—	—
L2158	B. Vleck	—	79	—	—
L2204	S. Ferry	—	35	—	—
L3077	D. Fraser	—	69	—	—
L2011	G. Albeck	—	18	—	—
L2155	P. Irvine	—	5	—	—

★

CALL BOOK MAGAZINE

The Federal Treasurer (Bob Boase, 65a Franklin St., Melbourne) still has for sale at £1 (post paid) the following issues of this great American directory of Hams: Winters 50/60 (United States only), Spring 1960 (United States only), Spring 1959 (world-wide).

D X

John C. Pinnell, VK2ZR
15 Summit Avenue,
Earlwood, N.S.W.
Phone: UW 4248.

NEWS AND NOTES

A few letters were too late to be published in the Jan. issue of "A.R." The writers must have forgotten that they had to be in a week earlier than usual to give the printers additional time due to the Christmas holidays. These have been included in this month's notes.

The 14 Mc. band was wide open at times, but it is playing tricks and not acting as we expect. Times of opening to various parts have changed but it is still open; trouble is to know when You have to lose a lot of sleep to learn that. 21 metres has been good at times but there are big spaces with very little activity. Asia has been particularly active. Central and South American signals have been fairly numerous.

VS6CO, the R.A.F. Kai Tak Club, is inactive at present as all operators have returned to the United Kingdom. The call sign is still being retained as it is hoped that someone will be licensed in the near future.

Kaliningradst Region is a new DXCC country. Both UR2KAA and UA2KAW are active from this locality.

W4FOC is now K1QHP which has been brought about by a notice from the F.C.C. He operated as F7ER/K2JCS and 3A2BN/K2JCS/F7ER and QSLs should have gone to W4FOC but now that is outdated. If you need cards from any of the above calls his present address is: S/Sgt. Albert L. Kemmesies, RA 11 072 340, Box 432, 9th U.S. A.S.A. Field Station, A.P.O. 74, San Francisco, California.

There is a possibility of activity from AC3 in the near future as a DX-pedition is being formed and sponsored by W7PHO's group.

FB8CE has confirmed that FB8GP (Comoro Islands) is deceased. He said he is planning to be active himself from Comoro at an early date, using the new prefix FH8.

Jan **DL9KR** is flying the Germany/Dakar route quite regularly, but the flying schedules are not always the same. It is difficult to forecast times for his trips. Recently he was active from Senegal as FF8CW, and on future trips expects to make side trips to FF4 (Ivory Coast), and FF7 (Mauritania). Bob Stankus, W2VCZ, 30 Pitcairn Ave., Ho-Ho-Kus, N.J., is his QSL manager.

Ruel **VP5RS** will be active on Sunday evenings looking for s.s.b. He likes to ragchew, but has agreed to the above schedule to overcome the rarity of Jamaica on s.s.b. W2VCZ (address above) is his QSL manager and will receive VP5RS logs about once a month.

K1CRB/XV5 is located in Saigon, Viet Nam. He has the equipment ready to operate but so far permission has not been granted due to the political situation. Six other Amateurs in this area are also trying to get permission to become active.

AC5PN, Khutan, is working fairly frequently of late. He is using a.m. on 21 Mc. around 1100z.

MP4QAR has licenses for all four MP4 countries. He has been worked from Trucial Oman and Kuwait recently.

ZK2AD, Niue Island, has been fairly active around 0700z over the past few weeks. Phone and c.w. is being used on the 14 Mc. band.

Guadeloupe.—Several hundred **FG7XF** QSLs have been despatched by W2CTN. Logs received include all contacts up to June 29.

ZB5AR was worked by K4TEA on 24th Nov. "He said he was on Crag Island, name Nevel, and QSL via R.S.G.B. He also said he was a new country." Not sure of this one.

W7VEU is reported to be planning a DX-pedition to Marcus Island this month (Feb.).

AP2M, West Pakistan, is active on 14 Mc. a.m. from 16-2200z.

The most active stations in the Mali Republic are FF8AC, BF, and CK. There are eight other licensed stations in FF8-land.

Franz Josef Land has two licensed stations—UA1ZEC and UA1ZEA. So far they are not active but hope to be on the air in the near future.

Russian polar stations—UA0AZ, UA0BF, UA-0KAR on Dickson Island; UA0IK, Povek Chakotka; UA0KAR, Cape Cheyuskin; UA0KID, Chuouka Post; and UPOL-8 on Arctic Ice Is.

z zero time—GMT.

The change in prefix to 5N2 for the Republic of Nigeria took place on the 1st Jan., 1961. The same suffix letters were carried over from the old call signs.

Syd 3V8CA is on 21 Mc. c.w. or s.s.b. daily around 2000z. He is ex-W8UTQ/3V8. W4YXW is QSL manager since the call has been changed. (W4YWX, Paul Newberry Jr., 3950 Bloomfield Rd., Macon Georgia.)

New DXCC Countries.—Three new and separate countries will be added to the DXCC list on March 1, 1961, and one has been deleted.

Additions: Kaliningradsk Region (Russia); confirmations for contacts with Kaliningradsk stations must be dated Nov. 15, 1945, or after. These stations have used the prefix UA2. This region is separated from European Russia by quite a distance.

Mali Republic.—Confirmations for contacts with Mali Republic stations must be dated June 20, 1960, or later.

Senegal Republic.—Confirmations for contacts with Senegal Republic must be dated June 20, or later.

Mali Federation.—This listing is deleted and replaced by the Mali and Senegal Republic listings. If DXCC credit has been given toward the Mali Federation listing, credit will automatically transfer to the new appropriate listing. Credit may be currently claimed on either Senegal or Mali Republic confirmations, but whichever one is claimed now, then the credit for the other cannot be claimed until March 1, 1961.

More details will be found in "QST," Jan. 1961 issue.

The Cyprus situation: Much speculation and discussion has been prevalent within the DX ranks in recent weeks over the possibility of separate DXCC status for British sovereign areas in Cyprus, now separately governed from the newly independent main body of the island.

The DXCC Awards Section of A.R.R.L. will continue considering these base areas as part of Cyprus. However, the two military bases, of 99 square miles total area, were retained by the British Government under the sovereignty of Her Majesty the Queen. These comprise the Akrontiri Base area and the Dhekelia Base area. These are not held on lease but are domains of the British Crown in perpetuality. Perhaps some day they will count as separate for DXCC purposes.

Some of the harder to get stations in Asia were out in full force for most of the month. These included JT1, UH8, UI8, UM8, XZ, etc., which could very often be landed on the first call. They started to come in just after 1000z and petered out just before 1300z on the 14 Mc. band.

Brian VK5AB has worked AC5CQ a couple of times and has already received his QSL. He didn't find him hard to work although he had to fire up the a.m. phone rig to do so. It is understood he closed down over the Xmas-New Year period but is back on the air since then.

Rhodes SV0.—SV0WX, in Athens, said a Canadian Ham had applied for a call to operate from Rhodes. (3ARX).

ACTIVITIES

Laurie **VK2AMB** has not been so active over the last couple of months. Among those DX stations worked on 14 Mc. c.w. was FQ8HO and KP4ANS. Those heard on the same band were CE3ME, F9UC/FC, JZ0PO, HK3RQ, KM-6JB, ST2AR and VK0BH.

Col **VK2AQU** used s.s.b. on 14 Mc. with an input power of 85 watts. The antenna was a dipole. With this set-up he worked: CE2CC, CX2AX, CR9AH, HL9KS, I1AMU, I1KL, KA-2IE, KC4AAC, KC4USH, KB6BH, KM6BO, KC4USV, KR6MD, KA2MM, KX6BQ, VK9NT, VS1JU and W4SAL/Aero Mobile between south pole and McMurdo Sound.

Frank **VK2QL** operated c.w. on three bands with low power and antenna about fifteen feet high. 3.5 Mc. worked: KH6IJ, KV4CI, and heard KR6LJ. 7 Mc. wkd.: KV4CI, XZ2TH and heard VQ3HD, CN8MB; 14 Mc. wkd., FL-8ZA, HS1R, KV4CI, VP5BL, VQ9HB, TF3AB, XW8AO and heard AC5PN, FQ8HO, FQ8HP, 2V8CA, 6O1MT.

George **VK2QU**, at Lithgow, has trouble with t.v.i. so does a lot of operating when t.v. stations are silent. On 14 Mc. c.w. he worked over 250 DX stations for the month and the wads of QSL cards he is getting each month speaks for itself. Worked, Africa: 5A2TZ, 5A3TF, CN8DJ, 9U5MC; Asia: MP4BCV, 4X4FS, VU-2MD, VS9MB, HZ1AB, BV3HPT, HM9A/P, HL9KT, XZ2TH, Js; Europe: EA4GG, UO5PK, IT1AQ, SP9TA, SP3AK, DL1AS, SM3BTH, SM-3BTU, I1YB, SV0WZ, OH1TR, LZ2KUK; South America: HC2IU, HC3CN, LU2HBM, LU3BH, YV4AY, YV5ADP. Also FK8AI, FK8AH, JZ-0PO, KV4CI/MM, W6BSI/MM (Carribean Sea), KZ5LC, TI2CMF, TI2WA, VR1B, VS1FZ. George also worked W.A.C. in under two hours—YU-5CM, CN8DJ, OA7F, K1IFJ, HZ1AB, VK2ZR. Heard: FA9VJ, CR6CJ, KP4AQQ, KP4ACF, HP1BR, HH2OT, FM7WPD, ZB2AD, CO2HQ, PY3ALB, VQ4ST, JT1AJ, CM2BT, YS1O, and OX3MD.

VK2ZR worked 111 DX stations on 21 and 14 Mc. c.w. for the month. These contacts were from 48 countries. 14 Mc.: BV3HPT, FB8XX, G5RL, HB9ZY, HK1HV, JT1AC, LU3HL, LA-7XF, OH3OD, W8OLJ/PK, SM5EC, UA1KGC, UA9KPN, UB5MZ, UI8KAD, UM8FZ, UR2AR, UT5CC, VK0JM, VS1FW, VS6EQ, VS9MB, VU-2BO, YV4CI, ZE8JW, ZM6AB, 9M2FS. 21 Mc.: DL6MK, F2KZ, G5DQ, KV4CI, KV4CI/KP4, LU8FBH, OH3TE, ON4TC, SP3DG, SM2COL, TI2HGA, UA1DH, UA9CL, UD6BB, ZC4CT and ZS5BA.

Rick **VK3ARX** used 75w. to work the following stations on 14 Mc. c.w.: FK8AH, FL8ZA, MP4BDE, MP4QAR, MP4QAQ, MP4TAC, MP-4TAK, UD6GW, W8OLJ/PK, VS9AAC, VS9MB, VS9OA, VP5BL, VP6LN, YN1AA, ZB1FA, ZB-1HC, ZK2AD, ZM6AB, 5A3TN, 6O1AA, 6O2GM, VK0FZ (Macquarie). Rick now has 162 wkd. and 114 confirmed, leaving 46 more to come.

Reg **VK3YD** has got among some of the new prefixes in Africa but as he had already worked them before is not sure how they will count, but the new ones for certain are HK0HCA St. Andre Is., ZK2AD, ZL3VH/3, F2CB/FC, ZS7R, FQ8HO Tchad, YS1O and EA9AP. Wkd. 14 Mc. c.w.: 3V8CA, 4X4FS, 4X4LC, 4X4YL, 5A-3TN, 6O1MT, 6O1AA, EA9AP, F2CB/FC, FA-3CT, FK8AH, FQ8HO, HH2OT, HP1BR, HK3AH, HK3RQ, HK0HCA, KM6BQ, MP4BCV, OA4ED, OD5CT, PJ3AD, TI2DN, TI2DQ, VQ1A, VQ8BM, VS9OA, XE1FFB, XE1MB, XZ2TH, YN1CAA, YN4AB, YS1O, YV1AD, YV1DC, YV4CI, ZC-4SS, ZE1JN, ZK2AD, ZL3VH/3, ZS6IW, ZS7R, FL9, JZ0PO and many others from Asia and Europe. Heard: ZP9AY, VP3YG, ZD2JKO, CR4PU, FR7ZD and ZS6IF/9. 50 countries worked for the month.

Hal **VK4DO** worked 14 Mc. c.w.: W/K, KG, KH, JA, DU1OR, JZ0PO, LU3HL, UA0BP, UA0EH, UA0KYA, UA9DN, UA4KAB, YV1AO, ZK1BS, 4X4YL. Heard: CR9AH, FB8CW, FL9D, FB8ZZ, HA5KFR, PY1CD, SV0WI, TI2WA, VQ-8BC, VS6EN, VS9OA, VS9MB, VU2AZ, VU2MZ, YN1AA, YV5DE, 9M2EV, 9M2FS, UA0CK, UA-0KKB, UA0KKS, UA0TN, UB5BB, UI8KAA, UL7KBA, UM8KAB. 14 Mc. phone: VK9RH. Heard: I1AMC, 9M2FN. 21 Mc. c.w. wkd.: DL7RA, DL3RK, F8VQ, F2MA, G6QB, G8ML, G3JUZ, LZ1KBA, LZ1KSZ, HB9LO, OK1AWJ, OK1US, ON4KK, ON4TJ, SP6FZ, SP3DG, SP-6YC, DM3AML, DM3HL/4, UA9CL, UA9KOG, UI8AG, UJ8KAA, UA3FU, ZC5AE, 5A5TA. Heard: DL1DV, DJ4IT, DM3KML, HB9ST, OA-4FU, MP4TAI, OH3NI, OH5RH, ON4MS, VU2GE, VS9MB, UA3RO, UA3VB, UB5KBU, UB5KFF, UB5SD, UL7KBA, UO5GA. 21 Mc. phone, wkd.: AP2MR, JZ0PM. Heard: CR9AN, DL1VX, DL1SD, G2IT, G5ZT, KG4AK, KP4WD, 9M2EW, 9M2EX, 9M2MW.

Brian **VK5AB** used s.s.b. on 14 Mc. and found the band to be very active; wide open at times and other periods almost dead, but by watching for the right times DX could be worked every day. Wkd.: CN8AR, EP1AD, EQ5X, EI8P, EA2CQ, EP2AG, FL9, FL8ZA, FO8AN, FF8CW, FS7RT, F7GC, GD3ENK ,HC1KA, HK-0HKA, HZ1AB, HC1FG, HB9TL, HK5EV, HL-9KS, HS2A, KG4AP, K6CQV/KS6, KG1AA, KV4BQ, KC4USH, KC6OZ, MP4BBN, MP4BDD, MP4QAQ, MP4TAI, OD5CT, OE1CS, OA0LA, PA0PRF, PY2CK, SM5OH, SW5LFM, SV1AE, SV0WN, TG9AD, UR2AR, UB5KAB, UA4CB, UP2CG, VS9OC, VQ9TED, VQ4RF, VS6AE, W4HSF/VO1, YN0NWO, YS2SA, YV5ATW, ZD-2PJB, ZD9AM, ZB2A, 5A3TX, 6O1AA, 9M2DB, 9Q5AG, 4X4s, Gs, DLs. Brian also worked UA0EH a.m. to s.s.b. on Wrangel Island on 21 Mc. He got UN1AB on s.s.b. just after he had been deleted as a DXCC country. Other comments: Choice ones were 6O1AA, FL9, FL8Z, ZB2A was on s.s.b. for a couple of days and Danny was FO8 for about one and a half days. UA0LA s.s.b. in Zone 19 and ZD9AM was on Gough Island for one day using s.s.b. The only VK worked by ZD9AM was VK5AB.

George **VK5RX**, 14 Mc. c.w. wkd.: TI2CMF, VQ1A Zanzibar (W4BPD), OK1ACV, OK1RX, HK7ZT, LU3HL, LU7GT, LU8MAH, YU1DVW, PA0VB, PA0WAC, YO2BJ, HA5KAG, HB9KO, UB5KED, UB5KAG, ZK1AR, VR3L, UT5CC, DLs and Gs.

Ray **VK5RK** wkd. 14 Mc. c.w.: KV4CI, KH6s, VU2NR, KA2HT, KG6AJZ, YV4AX, KR6IQ, XZ2TH, VU2BO, JA9FV, 4S7WP, UA0KKD, K0SLD/KW6, VR2DK, Gs, DLs. Ron VK5GM has been too busy with other activities to get among the DX this month.

Eric **BERS-195**, hrd. on 7 Mc.: SP8KAF. 14 Mc. phone s.s.b., KG6NAA; 14 Mc. c.w.: BV-3HPT, CO7AI, EA8BW, FB8CJ, FL8ZA, FL9, HK1QQ, HK0HCA, JZ0PO, KM6BV, KV4CI, KW6DG, KZ5TD, LA1VG/M, OA4ED, MP4BCV, MP4BDE, MP4QAQ, MP4QAR, OD5AI, W8OLJ/PK, ST2AR, UD6BB, VP9EP, VQ2CZ, VQ9HB, VR1B, VR2DK, VS1DN, VS9MB, VS9OA, XZ-

(Continued on Page 21)

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22 Seiffert Centre,
Queanbeyan, N.S.W.

A.C. RIPPLE

Does that weak carrier that you can hear in your own rx sound absolutely T9? If it does not, try adding an additional section of filter to the power supply to the carrier oscillator. You will probably be very pleased with the result. Just a word of caution, be careful about the placement of the filter choke. Make sure that hum is not induced in it from the power transformer.

CARRIER SUPPRESSION

How often have you been told that you have some carrier showing? This report usually makes you go through the carrier balancing procedure all over again and often you have been sadly misled. For instance, if your signal is "40 db. over S9" at the other fellow's rx, and you have a carrier suppression of 40 db., your carrier level will be S9! So before you get the screwdriver and test gear out, make sure that this is not just a case of very good conditions.

S.S.B. ACTIVITY IN "G" LAND

The following is an extract from the Oct. 1960 "Sidebander" magazine—the publication of the Single Sideband Amateur Radio Association—and is an up-to-the-minute resume of s.b. activities in the U.K. It was compiled by Ted Hayes, G3KHE, the S.S.B.A.R.A. representative in England:

"160 Metres: A few stations equipped, some small activity but not a popular band, mainly because of the limited frequencies available. (Ship-shore transmissions nearly every 9 kc.)

"80 Metres: The main band for s.s.b. in "G" —many nets active each evening—1830 G.M.T. onwards. Main frequencies used are between 3.750 and 3.795. During the winter months, transatlantic QSOs are possible and this coming season will see many newcomers to s.s.b. making their first efforts to work Ws on this band. European stations are also operating in the above portion of the band and, during the night hours, some really good DX can be worked.

"40 Metres: Little activity on this band, mainly due to the limited frequencies now planned for European Amateurs but daylight QSOs are heard around 7.065 Mc. This band could be very good for dawn (G.M.T.) West Coast contacts; many W6s have been copied with S9 signals at this QTH around 0600 G.M.T.

"20 Metres: Still the best band for real DX in spite of the extremely poor conditions that have prevailed during the summer months. An increasing number of new G calls being heard and, with the availability of commercial tx's, I would forecast that the present number of active G stations on this band will be at least doubled by next Spring.

"15 Metres: Apart from the regulars that remain 'faithful to fifteen,' there is not a great deal of activity due mainly to the fact that only a small percentage of the tx's in use can operate on the band.

"10 Metres: Ten has been well and truly down in the doldrums for the last three months so little or no s.s.b. activity has taken place on this band. Coupled with the fact that very few stations can transmit on this band, it does seem that until (if ever) conditions do vastly improve, G signals will be most conspicuous by their absence.

"To sum up, at the present time, most s.s.b. equipment in use here in the U.K. is home-brewed and is mainly built to operate on 80 and 20. The two Amateur magazines in circulation here have recently both contained very good constructional articles, in particular those by G2DAF, and considerable interest has been aroused. The shortage of suitable filter crystals has become more acute which could mean a lot of construction not being undertaken.

"At the present time, we only have one English-made commercial tx on the market. Surprisingly, the price is comparatively low—costing roughly 325 dollars, complete with power supply. For rx's, the choice is not so limited, and these cost anywhere between 150 and 300 dollars with a new Eddystone rx in the 1200 dollar range."

20 METRE S.B. ACTIVITY

In an excellent position to hear most signals in Australia, John 4DD has been keeping a check on the number of VK sideband stations using the 20 mx band. He reports that N.S.W. leads with Victoria second. Here are the figures by States:

New South Wales	40
Victoria	24
Queensland	7
South Australia	8
Western Australia	7

Tasmania, Northern Territory, New Guinea and the Australian Capital Territory have one each.

John is continuing to keep the check, details of which I shall give you from time to time. I wonder how long before these figures are doubled?

PERSONAL

We all are familiar with how helpful the Amateur fraternity is, one to another. This was borne out recently by the experiences of Dudley 2DQ, who keeps a lone vigil from far away Broken Hill. Dudley writes:

"Had a Collins R390A i.f. strip sent me by a K4, and the Ham Spirit came to the fore when, following my weekly talks with Noel 2ZF, the following came along:

"5NN heard me asking for a wee piece of shielded braid; sent along enough for the job.

"3BQ likewise went into action after hearing my groans re 915 Kc. tuner and 455 i.f. strip; sent along 1370 xtal which works like a charm.

"3AHR found me a much wanted 6AK6 which was not procurable from my suppliers.

"ZL1AFO ditto, as they are readily obtainable in ZL, and I could not get at the socket to change for an available tube.

"Certainly makes one think that the sidewinders are a 'listening and acting' crowd, er?

"Noel 2ZF came to the fore when I mentioned that the 455 Kc. 16 Kc. wide mech. filter in the strip (along with the 2, 4 and 8 Kc. wide jobs there) served no purpose and the beautiful vertical slopes made me think that a xtal in the right spot with an a.f. filter to restrict bandwidth would probably do the trick in my new exciter; he wound up some toroids and selected condensers, and, on checking it the lads like the present audio cutting off at 2.8 Kc., so perchance we shall let you hear the new tx on either 80 or 20 one of these fine days."

And I have since heard the new 2DQ tx and it sounds very fine. No wonder his call is now known as VK2 Delightful Quality!

NORTHERN TERRITORY—VK8

John 2QJ has arrived back from his round trip to Darwin. John operated mobile with a KWM2 from VK4, 8, 5, 3, 2, and 1. While in Darwin, he visited Eddie 8OW from whose home Chuck 8TB has been putting VK8 on the s.b. map under the 8OW call sign. However, Chuck now has his own call, 8TB, and it is anticipated that he will be heard from Darwin for some time to come. Chuck, who is a Philco Systems Engineer, is attached to the Air Force. He is using a KWM1 and 2 el. Mosley beam and has held the calls W4RHE and W9DPF back home in the United States.

DX

(Continued from Page 19)

2TH, VS1O, ZB1HC, ZS1RM, 5A5TA, 6O1AA, SM5KV/9Q5. Eric received a card from KG-6ICD which now makes him 259 countries confirmed heard.

Don L2022 is now listening on 6 mx with a crystal converter into an AR7. He will be concentrating on this band and will not be listening on other frequencies for some time to come. Hrd. 7 Mc. c.w.: DL4ZR, G3LET, G6IC, JA3AIS, JA8LN, UA9FS, UA0OE, VR-2DK, Ws, YU4FST. 14 Mc. s.s.b.: G3FKM, KB6BH, KG6AJB, KH6AJB, KR6GP, VP6WD, a.m. MP4TAC. C.w.: FB8CW, FB8ZZ, HZ1AB, KM6BI, KW6DG, KP4CC, LU3HL, JZ0PO, MP-4TK, VQ4HT, VR1B, VU2NR, YU1AD, YU5ADP, ZC4AK, XZ2TH, 5A5TW. 21 Mc. s.s.b.: ZS-6AOW; a.m. VS5GS, KR6IM; c.w. KH6DQ. 50 Mc. a.m.: JA6NP, JA1CEY, JA4CJ.

Dave L3039 found the 14 Mc. band fairly good most evenings with some Europeans coming through, and plenty of UAs from Asia. 3.5 Mc. c.w. hrd.: SP2BK, F8EL, DL1GK. 7 Mc. c.w.: PA0KMG/MM. 14 Mc. c.w.: UA-0KUV, UA9VB, UA0UC, UA0CK, UA9KDL, VU2BG, VU2PA, TI2CMF, JA1FHT, JA1AB, OH3NM, BV3HPT, DU1OR, HK7ZT, KR6AF, VS6DS, YV1AD, KW6DF, UR2SW, W4DBA. 21 Mc. c.w.: JA1BQZ, UA9VB, VS5GS, VS9MB, OE3NH, WL7DNK, UJ8KAA, KN0EV.

QSLs RECEIVED

BERS-195: KG6ICD Marcus Is., LA3SG Jan Mayen, LZ1AG, M1/W4BPD, UL7KAA, UP2AC, VQ1SC, VR3L, YS1O, YV1AD, 4X4KC.

VK2QL: EP1AD, ZE8JW 7 Mc., FG7XF, UI-8AD, UO5PK, 8J1AA, TI2MF.

VK2ZR: ZD1AW, VQ1SC Zanzibar, YU3ZW, XZ2BB, JZ0PO, UB5KKK, DL8BZ, DL8CH Saar, CX2FB. 173 cards received for the month including 37 from listeners.

VK5AB: AC5CQ.

ADDRESSES

FQ8HP—Box 41, Brazzaville. (2QL).
HS1R—Via W5OZI. (2QL)
OD5CT—Box 5043, Beirut. (2QL)
W8OLJ/PK—Project Hope, Washington D.C., U.S.A. (BERS-195 and 2QL)
HK0HCA—Via K8ONV. (BERS-195)
HK1QQ—Box 342, Barranquilla, Colombia. (BERS-195)
VK3AYL—Melbourne C. of E. Girls' Grammar School, South Yarra, S.E.1, Vic. (BERS-195).
JZ0PM—Paul Meyer, Agots, Netherlands, New Guinea. (4DO)
FB8CW—Henri, P.O. Box 152, Diego Suariz, Madagascar. (4DO)
YN1CAA—Does not QSL says YN4AB. (3YD)
YN4AB—Hans Henrick, Siund via Managud, Nicaragua. (3YD)
ZM6AB—C/o. Faleolo Airport, Western Samoa.

Several letters of late show that many of us are in the same position as VK3ARX with regards to those much wanted QSLs to build up our DXCC confirmations. He suggests an "address wanted" list run occasionally may get the QTH from someone who has already received a card. In his case the Bureau, airmail sea mail, I.R.C., QSL managers, etc., have been tried. Still, 46 countries are outstanding.

To overcome, partly at least, this situation an "Addresses Wanted" column will be given a trial, starting next month.

I again wish to thank Don Chesser, Burlington, Kentucky, for the use of his DX Magazine in compiling these notes. Also thanks for the many letters received from VK Amateurs and Listeners. 73 John.

Correspondence

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

BIRDCAGE AERIAL

Editor "A.R.," Dear Sir,

My attention has been drawn to the correspondence which appeared in the September issue of "A.R." relative to the Birdcage Aerial. It is agreed that a V dipole has little directivity on its own. However, when a V dipole is placed apex to apex with a similar structure used either as a director or reflector an X type array results which is superior to the normal two element array with parallel elements, normally referred to in this country as an "H" array.

The improvement, in particular as regards front to back ratio, is so marked that X type arrays have almost entirely replaced H arrays for television reception in Great Britain. In the London area alone there must be nearly one million X arrays in use, and it seems probable that a similar trend will become evident in Australia as the t.v. industry develops.

The Birdcage is essentially two horizontal X arrays stacked vertically and fed in phase so as to provide increased gain and concentration of radiation at a very low angle. As in any other type of array, the precise length of wire for resonance is a function of wire diameter. Readers will doubtless recollect the fierce arguments which used to take place regarding the precise length of wire required in the loops of a cubical quad!

The Birdcages manufactured by the Minimitter Co. and sold in considerable numbers in the U.S.A. are fabricated with tubular elements of one inch diameter. Any attempt to reproduce the array using thin wire elements would naturally result in failure unless the dimensions were suitably increased. In the latest version, the parasitic element is tuned as a director, giving a further increase of gain, and the tuning stub is replaced by a small inductor which results in a more neat and tidy appearance.

—G. A. Bird, F.Inst.P.I., A.B.I.R.E. (G4ZU), Technical Director, Bird Patents Ltd.

MULTI-OPERATOR CLUB STATIONS

Editor "A.R.," Dear Sir,

I am writing on behalf of the Northern Command Signals Amateur Radio Club. We have noted that there is no section for multi-operator club stations in recent contests. We feel that there may be sufficient radio clubs, etc., in Australia to warrant the inclusion of such a section in future contests.

Such a move may go a long way toward increasing club spirit and stimulating interest among the younger members of clubs, particularly those who have not yet completed station building, or perhaps have not yet qualified for the A.O.C.P. The latter group may be able to operate under supervision according to the "Handbook".

We would be pleased to see further correspondence on this subject.

—B. W. Bartlett, VK4UW, President, Northern Command Signals Amateur Radio Club.

MORSE CODE

Editor "A.R.," Dear Sir,

I feel sure that my old friend Roth Jones is having us on. Anyone who has QSL'd VK-3BG on c.w. would confirm that he is one of the best c.w. operators in the game.

However as a good publicity man he may have deliberately over-stated his case in order to draw attention and bring about discussion on a just cause.

The trend today appears to be away from c.w. operating towards s.s.b. We traditionally associate s.s.b. with a.m., but a few moments to each mode will surely convince one that s.s.b. and c.w. are closely allied. A sharing of frequencies between s.s.b. and c.w. seems a more logical position than that of s.s.b. and a.m.

—N. Roberts, VK3NR.

Editor "A.R.," Dear Sir,

Since the publication of my considered observations on a more rational approach to the allocation of our frequencies, particularly on 14 Mc., it has certainly met with a mixed reception from congratulatory letters and telegrams to abusive letters. One chap even "did his block" in the streets of dignified Melbourne, causing unnecessary embarrassment to himself. Which prompts me to raise the question "How balanced are we?"

To add further weight to my initial remarks I solicited the aid of a business acquaintance currently employed on market research in a senior executive appointment with one of Australia's top manufacturing and marketing companies. (Incidentally he can tune a receiver quite well and read morse but has no interest in our hobby.) He has a natural flair for analysing a situation and forming his own conclusions—conclusions which, in his business, means the expenditure of a substantial portion of his company's revenue budget. The task I set him was to analyse the frequencies between 14000 Kc. and 14350 Kc. and determine the relative activity of the three modes, c.w., a.m. and s.s.b., between 8 p.m. and 11 p.m. on week days and on Saturdays and Sundays—morning, afternoon and evening. His report, which is listed below, makes interesting reading and surely substantiates my belief that we could well rid our bands, especially 14 Mc. of c.w.

DAY	C.W. %	A.M. %	S.S.B. %
Monday	5	25	70
Tuesday	7	10	83
Wednesday	10	15	75
Thursday	5	15	80
Friday	5	20	75
Saturday morning ..	nil	5	95
Saturday afternoon	15	15	70
Saturday evening ..	10	15	75
Sunday morning	nil	10	90
Sunday afternoon ..	15	15	70
Sunday evening	10	10	80

These figures were taken over the full period and averaged. To the foot of his report he made the following observations:

> "Although the s.s.b. stations are far more active they are all concentrated in a small sector of the band whereas the others seem to have plenty of space which is not used. While my figures show the degree of activity they do not really portray the true picture as the s.s.b. is conveying a far greater amount of communication due to the duplex type operation; the c.w. and a.m., on the other hand, repeat so much of their material."

This all makes interesting reading, especially as they were taken out in a November week when conditions were fair to good and no contests operating. I was amazed at the low a.m. activity; the abnormally low c.w. activity was, of course, to be expected. The old diehards for c.w. want the frequencies just to use them when and if they want them and will fight hard (mainly by the written word in "A.R.") to retain them. Surely this is as selfish as one can get.

If my band allocation submission is not acceptable it is up to us to operate a.m. and s.s.b. from 14000 Kc. up. If the top 100 Kc. are not needed by c.w. then let those whose frequencies are cramped move in.

The figures from my friend's research exercise prove beyond all doubt that very, very few are interested in c.w. today, that s.s.b. is growing rapidly in popularity due to its outstanding efficiency and more frequencies are needed for the latter. The sooner we rid our ranks of c.w. the better for all concerned. Surely the will of the majority must prevail.

—Roth Jones, VK3BG.

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THE MIDDLE RANGE OF DX

These countries with large Amateur populations (over one thousand but less than two thousand) should assist you to obtain that DX certificate: CX, F, I, IT, KH6, KL7, LA, OH, OZ and XE.

NOTES

FEDERAL

FOREIGN LANGUAGE

Regulation of the Handbook for the Guidance of Operators of Amateur Stations has again been amended to permit Australian Amateurs to transmit "plain language messages in any recognised foreign language."

This regulation was first of all interpreted by Departmental Officers to mean only the English language. Five years ago it was amended to permit the use of foreign languages, and two years ago this was rescinded for reasons of security.

As from 1st January, 1961, you can again conduct your QSO's in the language of the other country providing you comply with the relevant regulations pertaining to the operation of an Amateur transmitting station.

CALL SIGN CARDS

Back about 1937 the Australian National Travel Association supplied 50,000 call sign cards to the Wireless Institute of Australia due to a nice piece of liaison work on the part of Mr. Allan Brown, VK3CX. These cards depicted typical Australian scenes, animals and birds and can still often be seen gracing shack walls in Australia and no doubt overseas.

The Federal Government recently made a statement that it is to take a more active role in overseas promotion of tourist travel to Australia as part of a plan to increase Australia's earnings of foreign exchange. The Prime Minister (Mr. Menzies), when announcing the plan, said that the Government would continue its support of the Australian National Travel Association and an immediate additional grant to the Association has been approved to enable it to accelerate it present plans.

The Institute has approached the Association with a view to gaining its support for the printing of QSL cards for the Amateur Service which gives a unique opportunity for Amateur Radio to fill yet another role. Some 100,000 cards are sent out of Australia annually, providing an excellent medium for assisting the Government in its Tourism Promotion Plan. If the Institute's application is accepted and taken up, cards will be made available to all Divisions for free distribution to members.

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FEDERAL QSL BUREAU

It would be appeciated by those associated with the VK3 QSL Bureau if VKs 3VJ, 3XU and 3AWX would please clear the huge (scores) of QSL cards accumulated at 478 Victoria Pde. (Thanks if already done so.)

An interesting QSL to hand for yours truly is that from VK3AYL, the recently acquired call sign of a Church of England Girls' Grammar School near Melbourne. Apart from Science Master Chapman, the operators are teenage girls, of whom Mary and Gail are "chiefs". The station is active on 7 Mc. phone using 10 watts input from a Type 3 Mark II., into an end-fed half-wave antenna and using a 4-tube rx. Rather a humble set-up, perhaps, but the girls are keen and will be more active than ever in 1961, when VK3AYL will become one of the activities of the School Science Club. The girls are designing a special QSL card for use in 1961. Contacts will be appreciated.

Can you guess who is the Federal QSL Bureau's best customer? Statistics during the past five months show that VK5NO and VK5NQ share the honor, and they're well out in front of the QSL card field of a thousand or so. Congrats OMs.

SILENT KEY

It is with deep regret that we record the passing of:—

VK3II—T. L. Simpson.
VK3LM—J. S. Anderson.
VK3AMB—K. M. Wheelahan.
VK5PB—W. P. Burford.

During 1961 the Kansas (U.S.A.) Federation of Amateur Radio Clubs announce that trophies will be awarded to the DX station working most Kansas stations. QSL cards will be necessary. Send application with date and time of all claimed contacts (but do not send cards until requested). There is no fee. Entries close 31st Dec., 1962, at 1203 East Douglas, Wichita, Kansas, U.S.A.

Another award available. The Sunflower Centennial Certificate for proved contacts (10) with Kansas Amateurs during the 1961 calendar year. One award for phone and one for c.w.-phone mixed. No fee required. Send QSL cards (or signed statement by a radio club officer that the QSLs are in possession of the applicant). Cards will be returneod. Send to same address as for previous paragraph claim.

At about the same time as these notes are being read, Ray VK3RJ should be only two or three days' sailing from Melbourne on the completion of a round-the-world sea trip with Mrs. Jones. For general information, Ray intends to continue his long-time jobs of Federal QSL Manager of the W.I.A. and writer of these notes for each issue of "A.R." Welcome home, Ray and Lil, and let's hear "all about it" per medium of the columns of future issues of this magazine.

—Eric Trebilcock, BERS-195, Act. QSL Mgr.

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FEDERAL AWARDS

D.X.C.C.—Attention is directed to the footnote in the Countries List regarding VP2 stations. All confirmations for contacts with Leeward Is. and Windward Is. prior to 1/6/58 should be perused so that advantage may be taken of the separate listing of the various members of the Federation as from 1/6/58, e.g. if confirmations are held for Antigua and Montserrat prior to 1/6/58 one credit will be given as for "Leeward Is.," but opportunity may be taken to submit a confirmation from either of these places (but not both) for a further credit as from 1/6/58.

Nigeria (ZD2).—As from 1/1/61 the prefix for Nigeria has been changed to 5N2. Further advice will be issued later regarding the British Cameroons which still use prefix ZD2.

HR, Honduras.—Add to Countries List shown in "A.R." Jan. '61. (Omitted in error.)

W.A.V.K.C.A.—During Dec. '60 Awards have been issued to: No. 142, W5LGG, Leonard Parsons; No. 143, K2UKQ, Kay Gaynor; No. 144, KP4CC, Juan Castanela; No. 145, K9EAB, Cliff Corne; No. 146, W4BYU, Ed Mau; No. 147, UR2BU, Karl Kallemaa.

—Alf L. Kissick, VK3KB, Awards Manager.

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AUST. CAPITAL TERRITORY

The Canberra Radio Society held a very successful Christmas meeting on Dec. 16. About 50 members, visitors and ladies were present including visitors from Goulburn Radio Club. The evening started with general interest films and at 9 o'clock the men retired to the tx room for a rag-chew amongst themselves, and the tx went on the air on 20 mx. The band was fairly good and the big switch remained unpulled till well after midnight. In the meantime, the ladies were entertained with films and supper.

For some weeks now, the Society station, VK1ACA, has been on the air from 7.30 p.m. on Friday evenings and continues on until the DX disappears. The station at present is putting 120w. of a.m. into an 80 mx dipole and is receiving healthy signal reports on the Hallicrafters hearing aid. A new QSL card has been printed and is available for collectors at a cost of one call on a Friday evening. Shortly, the station will be working c.w. as well as a.m. and later will go over to s.s.b.

Activity generally in A.C.T. is increasing and should grow rapidly in the next few months with the influx of population from VK3 land. The Canberra Radio Society proposes to liaise with nearby Goulburn and Yass Radio Clubs and shortly should have 50 and 144 Mc. nets operating throughout this area. At present 144 Mc. is regularly open to the south-west and with higher power might open up to Sydney. Recently one VK1, who shall be nameless, was returning from Sydney on a Sunday morning with 144 mobile gear.

Personalities: David 1ATR and his XYL (Doreen, 1YL) are leaving shortly for a few months overseas. No doubt we will see some fine equipment on his return from W land. Incidentally, 1YL has a fine c.w. fist on 20 if you are looking for a VK1 c.w. contact. She has been heard to protest at the "hullo-goodbye" QSO and complains bitterly at the card hunting Hams. So if you call her, stay and chat awhile.

John 1ZAR has a brand new harmonic, YL variety, and we understand is working very hard on a new outdoor shack. No doubt to avoid the local QRM. Congrats., John. We will congratulate you again when that v.f.o. on 144 is frightened by h.t.

Stan 1ASB is also sporting a new shack and a new s.s.b. rig. A very fine signal now that you've got the bugs out of it, Stan.

Eddie 1VP might be losing his dislike of the d.c. bands. After years on 144, he is now coming down to 50 megs. Careful Eddie, or you'll be on 80 mx before long.

Ted 1AOP has been off the air for several periods lately with odd illnesses but is now fit again and building up mobile and v.h.f. gear. We hope you avoid any further troubles, Ted.

Three members of the Society will sit for the full license in January, so by the time this is printed might have signals on the air. Several young members are taking the W.I.A. course and receiving morse instruction, so we should have a succession of new VK1 calls during the next year or so.—1ZDG.

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NEW SOUTH WALES

HUNTER BRANCH

The attendance at the final meeting for 1960 was poor in numbers, however it contained the usual enthusiastic all-weather core and while they are there we will never die. Stuart 2ZDF acted as projectionist and allowed Bill 2XT to look at the slides he took on a recent Eastern tour and give a few descriptive words. President Lionel struggled up three flights of steps with a c.r.o. but the pictures of it were entirely out of phase with Bill's slides. The comedy was supplied when Lionel did as he was told and put his finger somewhere to see if it was hot—it was, and the words that followed carried me back to the time when I travelled with a bullock team in Western Queensland. Noel Divirsey, of the S.S. Zafire, was a welcome visitor and he hopes to join the ranks of the Amateurs when he gets back to Hong Kong. Others in attendance were 2ZL, 2RJ, 2AYL, 2AKX, 2QB, 2AQR and associates Sutherland, Stobbs, Munn, Blyth, Gray and Bailey. Congratulations were extended to Norm Finch in passing his Z license; might see more of you now Norm.

The meeting broke up after there was a distribution of tinned or rather canned fish. Knowing what a rush there would be to get to the supper, I left a few minutes earlier for the other room. Even then I was too late to prevent Ardent from getting an early start. Bill 2ZL, being a bit older than the rest, was last there and it was only because I reserved

W.I.A. D.X.C.C.

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown.

PHONE

Call	Cer. No.	C'nt-ries	Call	Cer. No.	C'nt-ries
VK6RU ..	2	251	VK6KW ..	4	202
VK6MK ..	43	243	VK4HR ..	12	192
VK5AB ..	45	243	VK3BZ ..	3	176
VK4FJ ..	21	221	VK3GB ..	50	171
VK3WL ..	14	211	VK4RW ..	23	164
VK3ATN	26	204	VK3EE ..	10	163

Amendment:

VK3TG .. 48 112

C.W.

Call	Cer. No.	C'nt-ries	Call	Cer. No.	C'nt-ries
VK3KB ..	10	286	VK4HR ..	8	218
VK3CX ..	26	273	VK3XU ..	48	213
VK4FJ ..	29	264	VK7LZ ..	17	212
VK3NC ..	19	236	VK6RU ..	18	210
VK3FH ..	15	226	VK3YL ..	39	203
VK3BZ ..	6	222	VK5RX ..	23	195

New Member:

VK3AX .. 68 119

OPEN

Call	Cer. No.	C'nt-ries	Call	Cer. No.	C'nt-ries
VK2ACX	6	282	VK3BZ ..	4	231
VK4FJ ..	32	267	VK3HG ..	3	225
VK6RU ..	8	265	VK3WL ..	45	225
VK6MK ..	74	247	VK7LZ ..	23	223
VK3NC ..	77	238	VK3XU ..	61	221
VK4HR ..	7	233	VK6KW ..	13	216

him some cakes that he got any. As in past years, Mr. Stobbs, with a couple of assistants, served the coffee and very nice it was, too; so the year finished with quite a delightful evening and topped off an entertaining and interesting year of talks, lectures and films. Of course John Gray spoilt things by telling untrue stories about your correspondent; if he is not careful I'll spell his name with an "e".

Several v.h.f. boys have been very active lately—2AYL, 2ZMO and 2ZNW have been making the Sydney boys talk to them. Mac 2ZMO now has a rotable five-over-five and a well modified SCR522 and puts five-and-nine Sydneywise. Stuart 2ZDF has joined the ranks of T.Vidiots but after a few days of it went to Melbourne for a holiday. I thought Tanys had returned to Sydney. There was an excellent roll-up at Bill 2XT's joint, and he wined and dined the boys around the billiard table; thanks Bill from all of us. Associate Tony Mullins has gone and done it, but no doubt we will see him in due course; congrats to you and yours, Tony. Harry 2AFA, a stranger these days, is in the pink of health and as he hasn't had a game for a long time I took him around to Zulu Lulu so that Bill would win at least one game of billiards in 1960, but alas it was not to be. Sorry to hear that Ernie 2FP will soon be hospitalised, hope you are out before this appears in print.

Next meeting boys, Friday, 10th. Will you be there?

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VICTORIA

SOUTH WESTERN ZONE

The Zone has lost one of its earliest and best known members with the passing of Leigh 3II. Forty metres can never be quite the same without his distinctive voice and the Old Timers' Net, of which he was the mainstay, seems to have passed with him. Our sympathy goes to his XYL Mary and their family and to John 3AGD.

Now that the holidays are over and the harvesting mostly finished, activity has been noted again in the Zone. Static and the lure of DX has curtailed activity on 80 mx though. Reports from Graham ZL3UG indicate that the night owls Ern 3AEM and Danny 3ADD are still burning the midnight oil. Just shows how deep your scribe has to dig to get news from next door. Graham is the owner of a very nice s.s.b. signal and is looking for VK contacts on 80 mx. Before the s.s.b. scribe gets his foot on my neck, I must mention Neil 3HG, who is very close to his 100th country, on sideband now and also Chris 3AXU has plans to eliminate the carrier.

The 20 mx band has been letting quite a lot of VK3 signals come through here, one of them belonging ot Norm 3NC. Welcome to the notes Norm! Norm spends his time on 20 mx and is well up in the DX listings on the c.w. side. He uses, if my spies are reliable, 20 watts and an umbrella of 500 ft. vee beams from his shack on the hill.

Talking of DX, we believe some was coming through to Ballangiech recently and a certain honourable gentleman turned the wick up a trifle too much and the modulation transformer went up in smoke. Rumour has it that the power transformer accompanied it also, precluding any attempt to substitute a brass modulator. However, whatever the cause, Wally 3UT, we miss you.

Some new calls are noted within the Zone. Welcome to Eric 3XL and Lindsay 3ZKL. Eric is on 80 with both phone and c.w. Lindsay has gear ready for 288 Mc. using p.p. 7193s and super regen. and looking for starters. Looks like Bill 3XE is resting from the labours occasionally. (Who said this was the holiday season?) Bill has a tx for 288 Mc. but as yet no receiver.

V.h.f. activity is increasing again in the Zone with the 50 Mc. openings. At long last we have logged Bill 3ZFG with his 150 watts. Bill was too busy however with the VK4s to respond to a call from the west. Eric 3ANQ has dragged himself away from 2 metres to keep in touch with Peter 3FX who has taken the mobile to VK5 again.

The holidays brought Peter 3ZAV with his portable rig seeking high spots. It was reported that he would be on Mt. Napier but evidently Peter doesn't like the fauna up there, and who can blame him? Tiger snakes and Ham Radio don't mix too well. Instead he and his offsider set up in the fire spotters cabin on Mt. Rouse from where they made some good contacts and fooled at least one local listener who thought he was hearing 2 mx sigs from Geelong.

The holidays brought many of the Zone members down to the coast, amongst whom we found Kevin 3AKR at Warrnambool with his power boat. After a burn around Lake Pertobe and witnessing a masterly performance on skis by Francis Desailly, Brian 3XN has been bitten and talks of foresaking the shack for the lake with a home-brew boat. So far he has no takers for the skis but Bill 3XE is nibbling at the bait. We are pleased to hear that at long last Brian has shed his armoured shirt.

A well known station to Zone members is Jack 3APL. It is nice to hear that Jack is on the job again after a long spell off work and not too busy to have no time to spare for that new rig. The new rx there has a commercial front end, 85 kc. i.f. strip and all mod. cons. The new tx will run the limit with provision for s.s.b. with a T/R switch for break in. He has also completed a transistorised g.d.o. ranging to 40 Mc.

Dick 3ABK has an occasional QSO on 40 with the reworked Command tx with a.m. or d.s.b. as you order. Pat 3ADN comes up occasionally on 80 mx, but too much DX about on 20 for John 3ARJ and Harry 3XI. John is a regular with the Warrnambool group on 50 Mc. on Sunday evenings too.

Don't forget the W.I.C.E.N. practices chaps and please note the time is now 2030 hours on 3550 kc. until further notice. Also please make a note of our Melbourne link—Bruce 3ASN and Bob 3AUK. Bob and Bruce, who are father and son and operate at the same address, are formerly VL3s from the Casterton network and as they both work at the same place near their home, are prepared to open a channel to the city for emergency traffic on call. The telephone numbers are 27-3202 at home and XY 2451 at work, so if you find yourself in a spot with emergency traffic call someone and get them to ring Bob or Bruce.

MOORABBIN AND DISTRICT RADIO CLUB

The new Committee is as follows: President, Arthur 3AWO; Vice-President, Ken 3ACS; Secretary, Alf 3LC; Asst. Secretary, Harold 3AFQ; Treasurer, Peter 3APD; Committee, Ken Seddon, Harold Hepburn, Ted Curtain, Don Haycroft; Auditor, Ian 3AXC; Film Librarian, Laurie 3CN; QSL and Certificate, Bill 3JE; Transmitting, Jack 3VT.

The new syllabus provides for activities as follows: Five crazy whist nights, three barbeques, three 80 mx tx hunts, three film nights and a white elephant night, as well as a mid-

OBITUARY

THOMAS LEIGH SIMPSON, VK3II

With deep regret we announce the passing, after a long illness, of Mr. T. L. Simpson, VK3II.

After his early schooling at Hamilton and District College, he went on to Scotch College. From there he went to the Ballarat School of Mines and then joined the firm of Ronaldson Bros. and Tippett as an electrical engineer. Then came World War I. and young Simpson joined a Light Horse Regiment and saw service during 1915-16 with the 3rd L.H. Field Ambulance. Then in common with many other cavalry men he transferred to flying and as a pilot served the rest of the war with the 3rd Squadron A.F.C. on the Western Front. His exploits brought the awards of the Distinguished Flying Cross and the Belgian Croix de Guerre.

With the end of the war, Leigh went on to the property "Sazli," at Dunkeld, and started his long life of public service. He became a councillor of the Mt. Rouse Shire and represented them and the Municipal Association in many spheres. This took him, amongst other bodies, to the Glenelg Regional Committee and in interest in the port of Portland; and to the Country Fire Authority from 1946 to 1950.

In 1939 he took his Amateur license and the call VK3II, which became so well known on 40 mx. Later when the lettered number plates were issued, he registered car number VK311 and shared, with VK300, the distinction of being the only Australian Amateurs to display their call signs on their cars.

He took particular interest in mobile work and with the call sign of VL3JF and later VL3JA was one of the original members of the Westmere Rural Fire Brigades Network, which calls became as familiar to firemen as did VK3II to Amateurs.

Mr. Simpson was an Elder of the Dunkeld Presbyterian Church and he served his church well as a director of Alexandra College. Naturally his interest in radio brought him into association with the Flying Doctor Service which owes much to the Simpson family. A brother, Dr. George Simpson, whose death occurred only a short time earlier, made the first flight to an injured patient near Mt. Isa.

Among his other interests were the Glenelg Base Hospital, of which he was one-time president, committeeman and life governor. He served on the committee of the Hamilton P. & A. Society and the Hamilton branch of the Graziers' Association. During 1946-47 he was president of the Association.

Mr. Simpson was a keen field naturalist and a keen yachtsman on Lake Linlithgow. Lately he took up the sport of gliding and visited Benalla regularly for this purpose.

He leaves a wife, two daughters, a son, and two grandchildren to whom we extend our deepest sympathy. He leaves too a vast circle of friends in many walks of life and a place in our lives which can never be filled for such men are rare.

year party, annual picnic and Christmas party. Many visits are being arranged and lectures vary from technical subjects to travel.

In conjunction with our theory class we now have a morse code class held every Thursday evening. As before any non-member wishing to participate may do so by simply joining our club. Contact Alf Chandler, VK3LC, at 1013 High St., Armadale, or by telephone BY 3918.

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QUEENSLAND

PILGRIMAGE FOR PROGRESS

For some considerable time VK4 Division has felt that there could be much greater co-operation between metropolitan and country members in matters of vital importance in the administration of the W.I.A. in Queensland. The State capital, Brisbane, is situated in the remote south eastern corner of the State and industry and commerce have found it necessary to decentralise by creating branches in the larger provincial towns.

The Division thought decentralisation was the answer and, as my XYL, Jess, and I were proceeding northwards on holiday, Council delegated to me the pleasing duty of placing before the country chaps the advantages of forming further branches, particularly in Rockhampton and Townsville and also calling in at the various towns within the hurricane-prone areas and offering W.I.A. personnel and equipment to the local committees for use during periods of national disaster.

Now Jess and I are only a few microamps off sixty and ordinarily lead a Darby-and-Joan existance, but when the 22nd August, 1960, dawned bright and fair, Darby and Joan became Jack and Jill as we started off in a new Holden station sedan and joined the procession of southern travellers following the sun.

Mackay: Arrived 25th August, 1960, and contacted Pioneer Shire Clerk and other local committee members and found that Mackay, which is in a hurricane-prone area, is well and truly organised to meet the impact of any national disaster. Dr. I. Chenoweth, Government Medical Officer, is the moving force and claims that Mackay has the best emergency set-up in the State. I arranged for John 4FH to act as Liaison Officer between W.I.C.E.N. and the committee. John is a school teacher, amateur theatre enthusiast, singing instructor among many other things. During afternoon tea with John and XYL Millie, I found John had some excellent equipment and a dream of a tower.

Townsville: Townsville and Rockhampton are so strategically situated, geographically, that, together with Brisbane and Maryborough, they would be ideal centres from which W.I.A. affairs could be administered in such a manner that members in the remote areas could have greater participation and representation in our activities. Townsville and district Amateurs have formed the Townsville Amateur Radio Club and, although it is not affiliated, most of its members belong to the W.I.A. Upon arrival at Townsville on 29/8/60, I had afternoon tea with Bob 4RW. Bob is our staunch supporter in the north and is editor of the Townsville "A.R." notes. Dinner with Bob 4MF, who used to like me, and then, with Bob, proceeded on a shack crawl after collecting Frank 4PF. We finished up at the shack of Eric 4EJ, where there was a real gathering of the clan. I here met Charlie 4BQ for the first time and I believe Charlie still likes me. I was invited to address a meeting of the T.A.R.C. on 8/9/60 and during the waiting time received further hospitality at the hands of President Alan 4PS and his mother, Eric 4EL and Bert 4LB and XYL.

I had formed the opinion that Townsville Amateurs could not entirely see our point of view. The T.A.R.C. is a most enthusiastic band of Amateurs and its affairs are conducted most efficiently. It was quite understandable, perhaps, that they would resent any suggestion that the identity and present status of their club would be lost by absorption into the W.I.A. as a branch.

My address to them included the following as an argument for the formation of a branch:

1. I mentioned that the R.S.S.A.I.L.A. had seen the need for decentralisation and had divided its members into sub-branches, districts and branches, and that we could follow their example by forming clubs, sections and branches in our Division with the Divisional Executive in Brisbane composed of delegates from each branch.
2. Each branch would have complete self-government or autonomy in the local sphere and could approve election of members, issue certificates of membership, badges, etc., under delegation from the Division and answerable only to the Division in respect of matters of policy concerning the State or Commonwealth.
3. Each member would have greater participation in W.I.A. activities in that a motion passed by the Townsville Branch could, by being channelled through the appropriate bodies, quite possibly be adopted as world-wide procedure.
4. Each member would have greater representation in W.I.A. activities.
5. As an approved branch any motion submitted by them would affect all members, if adopted, and not just those in any one particular area.

Twenty-one members were present at the meeting, five apologies were received at the meeting and two further apologies were received by me personally. I received a most attentive hearing and at question time no punches were pulled, and if the gulf was not closed it was narrowed to the extent that it could be bridged by greater understanding on both sides. No decision was made and I gave an undertaking that I, personally, would do nothing to disturb the harmony of the club by trying to form a branch which would include only some of their members. I have every hope that the Townsville boys will form a branch and that their first job as a branch will be the approval of the T.A.R.C. as an affiliated club in their area.

Cairns: Arrived in Cairns on 10/9/60 and there met a very dynamic personality in Basil 4ZW, who hitherto had merely been a voice giving plenty of cheek over the air. Also Bob 4RW was in Cairns on holidays. Basil and his XYL Zoe saw us on every one of the 10 days we were in Cairns and did everything possible to make our stay enjoyable. A meeting was arranged and whilst waiting for the meeting I arranged for the appointment of Basil on the local committee, the secretary of which is Tom Briggs, Superintendent, Cairns Ambulance which conducts the Flying Ambulance. As a reciprocal measure the Ambulance Radio Operator, Charlie Harriman, was appointed treasurer of the Far Northern Radio Club and a 3 **k.v.a. transportable generator was made available to Basil** for emergency power when required. A visit to the shack of Arthur 4SM was a highlight of the Cairns' visit. Arthur is 70 years of age and his interest in radio dates back to 1911. Arthur and I nostalgically talked about pi circuits, Browning Drakes, Loftin Whites and generally had us a good time.

The Cairns meeting was duly held and 10 Amateurs were present including Harry 4OH from Mossman. The Far Northern Amateur Radio Club was formed with Basil as President and Afton Westcott as Secretary. Incidentally, these northern boys are real keen and some came 100 miles to our meetings.

Atherton: A Saturday afternoon meeting was held at the QTH of Harry 4HK, six persons being present. Thanks to Harry and XYL for their hospitality on this and other occasions and glad to hear that your son passed his scholarship, Harry. Alex 4MA travelled up from Mt. Garnett.

Innisfail: Arrived 26/10/60 and visited Civic Authorities and arranged with the Shire Chairman, Mr. Webb, for the appointment of Bob 4TK as Liaison Officer. Met Bob and XYL, Eileen, and daughter and enjoyed their hospitality. My only complaint is that Bob is so neat and tidy that my XYL Jess grabbed my ear and pointing to Bob's excellent equipment and layout, said, "What about it Mate?" I wonder what she meant.

Ayr: Arrived 30/9/60 and enjoyed the hospitality of Claude 4UX and his XYL Jess for the next few days. Claude is another of those energetic blokes with the right ideas. A meeting between Amateurs and Civic Authorities was convoked and convened at the Shire Hall and liaison established between us. Claude is A.O.C.P. instructor for the boys in the district and his success has been phenomenal. Claude's Jess and I did the sword dance over my crossed crutches with Claude at the piano.

Rockhampton: Perhaps I may be pardoned for saying that my visit to this town of over 45,000 souls was the highlight of the trip. Frank 4FN, past VK4 President, very energetic and steeped in W.I.A. lore and great was my pleasure when I learned that the Mayor of Rockhampton, Alderman R. J. B. Pillbeam, M.L.A., had by public notice, called a public meeting at the Town Hall for the purpose of forming a branch, on 8/10/60. The Mayor was most enthusiastic about Amateur endeavour and initiative especially from the point of view of national emergency and the provision of a healthy hobby as outlet for youthful energy. Frank was appointed President with the Mayor as Patron. Thanks, Frank and XYL Helen.

Bundaberg: Most Amateurs in this town, fifth largest in the State, are members of the Wide Bay and Burnett Branch and occasion was taken to address the gang at the weekly A.O.C.P. classes. Vic 4BJ, the Chief Kookaburra, was appointed Liaison Officer on the local committee.

Wide Bay and Burnett Branch: This is the pioneer branch and was formed at a meeting held on 9/8/59. Gordon 4GH is President and he has shown that the branch has the capacity to endure and develop. Classes are regularly held in the three towns in the area and membership has increased 100 per cent. since the inception of the branch. T.v.i. teams are active in the area.

It is my firm conviction that the life blood of enthusiasm must be spread throughout the State through the medium of clubs, sections and branches so that members in remote areas may participate in our activities.

Classes: One of our greatest sources of recruitment of members is the A.O.C.P. Class. Our greatest lack is a good correspondence course which would be available to all members. We gratefully acknowledge our indebtedness to Norm Beard of VK2 for his invaluable course supplied to VK4 members. We now understand, and appreciate, that it is impossible for Norm to continue to supply in the numbers we require and I here suggest that Federal Executive might consider the possibility of having courses printed or roneoed in bulk and supplied to the various States—for a fee of course.

In conclusion I would like to say that my partner and greatest help on the trip was Jess, my XYL. She is always "having a crack" at Amateur Radio but she is always ready with encouragement and practical help.

—S. J. Armstrong, VK4SA.

MARYBOROUGH

Gordon 4GH regularly on 7 Mc. and has even been heard on 14 Mc. Arch 4CB, in between t.v. openings, working some new countries on 21 Mc. phone—FQ8 is the latest. Con. Leacy, zone secretary, now picking up after a spell of ill health. Here's hoping for better health in '61, Con.

Ron 4BG back to his old haunts on 14 Mc. c.w. Doing better since re-connecting the feeders to his folded dipole. Grahame, ex-4DJ, will soon be on under a VK9 call. Bill 4SW is mainly operating on 7 Mc.

TOWNSVILLE

The New Year is now only a few days old. Just wonder how many has made the new resolutions and broken them already.

Conditions on the various bands have not been the best, though at times 21 Mc. opens up for some choice DX to appear. Have been lucky enough myself to land EP3 and AP2 on phone for new countries, while on 14 Mc. managed to make a contact with FB8XX on Kerzuelen Is.—his first QSO for 1961.

Pleased to hear the southern boys on 50 Mc. calling the Z boys in Ayr during the Contest. At times good openings, but so far this year Contest scoring is below last year's Ross Hull Contest.

Very pleased to hear old voices back on 7 Mc. Frank 4FC at Ingham has a new resolution to let the grass grow while he calls CQ. Alec 4MA from Mt. Garnett put in spare time on the band, while Harry 4HK uses a portable rig while re-building—very nice signal and f.b. modulation. Basil 4ZW still wiles away the time talking to Bob 4TK and dodging the washing up. Charlie 4BQ took off for the Tablelands but think floods beat him; was not away long enough. Bill 3ALY mooching around the north, so far has not called, maybe too busy with Bob 4CR in degassing 807s.

How many read the article in Readers' Digest for January, "Calling CQ". Key to airwave adventure. Very nice to show the scoffers and a boost to the many who are hoping someday to do the same.

See by last "A.R." that some chaps in the fringe areas of t.v. are having problems. Can anyone say just what is the official view with regard to these areas? See Correspondence page "A.R." 1960. My head not yet chopped off.

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SOUTH AUSTRALIA

The monthly general meeting of the Division that has the least number of "Squares," to wit, the VK5 Division, was held in the club rooms to a capacity audience of 151, being one more than that of the same meeting last year, and took the form of the usual Xmas Get-Together. The attendance beat the all-time record for this type of meeting by one, and again proves just how popular this gathering together in festive spirit has become with all and sundry. Official guests included Mr. Kerr from the Emergency Fire Services, Mr. Traynor and Mr. Pike from the P.M.G's. Dept., and a number of other celebrities about which I am unable to say anything, owing to the fact that somebody purloined the visitors' book, but this I can say quite sincerely, visitors and members all thoroughly enjoyed themselves and the convivial spirit displayed throughout the meeting had to be seen to be appreciated.

The President and Chairman of the Division, Lloyd 5OK, opened the meeting and read out the list of new members, and as the meeting was in the process of ratifying them, up jumped Joe 5JO and in considerable haste said, "Mr. Presamsjeid, I heresjeodj move thoepfy allotpdu be suspendourhauert." Cool as the proverbial cucumber, Lloyd, without blinking an eyelid, and giving the impression that he had understood every word that Joe had said, gracefully inclined his head and with a sad smile on his lips said, in a voice broken with emotion, "It has been moved that all business be suspended until next meeting," and before he could say anything more, 150 voices said in unison "seconded".

Now if you have read the opening of this month's notes, you will have by now discovered that 151 members were present, which means that one member did not second the motion and despite the hostile glances from 150 members present, Luke 5LL stood his ground, or perhaps it should be, sat his seat, and exchanged glare for glare. All of those standing immediately called out "Division," and before you could say s.s.b., those foolish enough to stand up for the division remained standing all night, and those canny ones who called "Division" were comfortably seated with grins on their faces like cheshire cats. Luke, by this time, had realised that for once in his life he had said the wrong thing and spent the rest of the night explaining to the standeruppers and at the same time received the plaudits of the cheshire cats. Whilst all this was going on, the President had become a sobbing wreck at the lack of business acumen on the part of his flock of morons, and was led gently away by one of his sympathetic councillors toward the kitchen, from whence for some considerable time his grief-stricken sobs could be heard at regular intervals, together with the noise of Coke bottles being dropped on the floor. To save further embarrassment to all concerned the lights were gently lowered and the first film appeared on the hastily erected screen.

Three films were shown, a Walt Disney story about the busy Beaver (I had an attack of conscience half way through this film!!), an excellent cartoon on the common cold, and to wind it up, and also to give the viewers a chance to sharpen up their teeth for supper, an extremely interesting film of the well known VK4 coral reef. I have seen quite a number of films at our general meetings over the past years, and I can say without any fear of contradiction that these three films were outstanding and far and away the best that we have ever seen, and a pat on the back goes to Neil 5ZAW who arranged the screening.

At this point in the proceedings the chairs were moved back, the tables were set up, the goodies were brought on, and all present prepared to do battle unto the death, and then disaster struck. It was discovered that the milk supply was non est, and consternation reigned supreme. Apologies were the order of the night, and although nobody seemed to mind, it was unfortunate that it had to happen. Several stories went the rounds concerning the reason for the missing milk supply, but I do not subscribe to the one which said that Doc 5MD left it until dark to get the milk and thought it was Strawberry he was dealing with, whereas he found to his dismay that it was Ferdinand. He was still puffing when he reached the meeting, but I am not one to judge by appearances, although he did appear a little pale and wan!!

Les 5LC caused further consternation when he had the audacity to ask for a spoon to stir his tea, but after a frenzied search in every available cupboard the missing spoons were found. Wouldn't it just be like Les to ask for a spoon to stir his tea? He is probably a direct descendant of Oliver Twist!! Anyway, despite all these distractions, everybody seemed to enjoy the goodies, and as usual the remains of the orgy were taken to the St. Mary's Home for Children, and once again the Matron of the Home extends her grateful thanks for remembering them.

All in all, a jolly good night which was thoroughly enjoyed by all present, and reflects great credit on the members of Council who were responsible for the arrangements, both before and after the meeting, and as I was carried from the supper room to my car by sixteen or seventeen of the members, I was speechless in praise for their efforts and could only say "Burp Burp."

Jim Paris was in charge of the food preparation in the kitchen, and must have put on two or three stone in weight from the beginning to the end, judging by the bulges in the most unlikely places, but after all he did a great job and could be pardoned for sampling the wares now and again, after all he wanted the best for the guests!

Cec 5BZ was noticed to the fore at the meeting and was looking well following his recent trip to the Snowy River scheme in VK3. Cec, as you know, is one of the Trustees of the VK5 Division and a master of the spoken word, which he suavely demonstrated when I said it was bad luck about there being no milk. "Oh that is nothing," he graciously said, "I don't drink milk myself!" "I am alright Jack," they call him!

A real old-timer in Arthur Cotton (ex-5HY) came up to me at the meeting and said that he had left my little bit of supper in the kitchen, for which I somewhat surprisedly thanked him. Several more of the members also came up and told me the same. Suspecting something afoot, I made a few judicious enquiries, only to find that Keith 5KH had announced over the 5WI session to bring a basket supper and a little bit for "Pansy." How low can one get?

Arch 5XK, the Prime Minister of Lucindale, heard on 7 Mc. on New Year's Day working all and sundry. Announced that Joe 5JO was his house guest for the week-end and was still wrapped in the arms of Morpheus. Heard Joe later and he sounded quite fit and well. Understand that he was on the way to visit poor old Jim 3LM but heard the bad news of his passing when he called into Arch.

Ken 5IM also heard on N.Y. morning bemoaning the poor conditions on the band for N.Y. eve and not being able to exchange seasonal greetings with any of the boys. To cap it all, he said that the planes were flying up and down the passage all night and slamming the doors as they went through. Frank 5MZ paying a visit to the S.E. including Mt. Gambier, and by now has returned to the big smoke quite convinced that the S.E. boys are a great bunch of fellows. Was heard plaintively calling for Carl 5SS before he left, but no Carl could be heard. You should have made a noise like a budgie Frank, that would have brought him out.

I thought that I had heard everything in Amateur Radio, but I never thought that I would ever hear Luke 5LL say that he never turned the radio on at all during N.Y. eve. Seems that t.v. claimed his attention and he forgot, of course it might have been because his outlook was a little sour at the time, he broke an axle on the last day of the year!

George 5RX, our local certificate hunter, added another one to his belt last month when he received his much sought after W.A.P. certificate. The number of the certificate was only 10, which leads me to believe that it will sojourn on Wilkes some time this month, and find a home among George's rare ones.

Brian 0CX (ex-5ZCX) arrives home from his to celebrate his return to the land of civilisation he will walk up the aisle with Gwen. No further information available on Gwen except that she is a VK3, but I have my spies at work and expect all of the gen any day now. Joe 5JO has been maintaining skeds with him for some time and possibly he will give me all the details if I put the vacuum pump on him.

Norm Coltman (he who is addicted to diving down trapdoors into cellars and lobbing on his head) is up and about again and looking none the worse for his experience. The latest information on Buck 5DA is that he is making slow progress toward his normal health. Incidentally, I had a fortnight down with bronchitis myself, but did anybody ring me up and enquire about my health? Did anybody make an announcement concerning my serious condition at the general meeting? Did anybody give me a cheerio over the 5WI session on Sundays, and say that they hoped that I would soon be well again? The answer is no, I repeat NO, and why? Simply because Council with its usual disregard for my feelings clamped down with a news blackout, even though they knew I was uncertain as to whether to choose a shovel or a harp. I am cut to the quick.

This Morpheus joker must have got around a bit on N.Y. morning. He had a stranglehold on Keith 5WI whose alarm clock failed to go off in time for his usual 5WI session, and he eventually staggered out full of apologies and did his usual fine job on the session. That clippety-clop sound that was in the background of the session for the first ten minutes was his tongue dragging on the ground, so they tell me. You should have heard the mob ducking in and out on the frequency saying "Hello Test" and then having a quick listen. You should be highly pleased with the audience reaction Keith, they did everything except shout and whistle and stamp their feet. Leith 5LG would have done that too, only he couldn't get them more than three inches off the floor until later on in the afternoon.

One never knows when or where one may come in contact with a would-be or ex-Amateur. The other day my XYL tricked me into staying in bed for a couple of hours on account of my cold and before I knew where I was the doctor was ringing the door bell. My wife let him in, ushered him into the bedroom, and then discreetly withdrew, closing the door behind her to await the dread verdict. Well, to make a short story longer (And How!!—Ed.), he ran the rule over me, complimented me on my athletic figure and muscular build, and then on my asking him when I could go back to work, he said, "What do you do?" I told him that I was at the best broadcasting station in the Commonwealth, if not in the world, and was somewhat amazed to have him tell me that he was very keen on radio, especially Amateur Radio. He said that he had been down on several occasions to Doc 5MD for some code practice, but somehow or other his medical studies had prevented him going on with the ticket. Well we had quite a long talk on the hobby of Amateur Radio, and of course whilst all this was going on, my wife was pacing up and down outside the bedroom door prepared for the worst. Finally, unable to stand the uncertainty any more she gently opened the bedroom door and with a very woe-begone face

said, "Is he very ill doctor?" The fact that the said would-be Radio Amateur Doctor was sprawled across the bed demonstrating the G4ZU beam with the aid of his stethoscope and a couple of boxes of pills did not improve the situation, and by the time that my wife had finished her thesis on Radio Amateurs in general, the doctor had clambered into bed with me in self defence.

Although he left the house in quite a hurry we managed to get out of him that the germs had come from VK3, probably on a Xmas card, and believe it or not, on checking through the thousands of cards from VK3, well hundreds anyway, sure enough on a card from Ken 3AFJ and family, there were strange little men drawn in ink on one of the pages and plainly labelled germs. Well, how do you like that, and me always so careful where that family is concerned. Never mind, my turn will come, I've got a team of germs that will lick theirs any day, but what made me take to my bed was the fact that after Joan had sent me that book on aeroplanes and kidded me up a tree, she had to have a hand in such a dastardly plot. My faith in womanhood is broken for ever, well for a while anyway! Joan, how could you?

I have it on good authority that a regular exodus from Council will take place at the end of this 1960-61 financial year, and strangely enough all those giving it away are in no way disgruntled or sour. It just happens that business ties, domestic ties and the like have caught up with them all at the same time. Of course I have been sworn to secrecy and cannot tell you that the President, the Vice-President, the Secretary, the Treasurer, the Federal Councillor, and a couple of others will be throwing in the towel, but no doubt you will hear it from someone or other, and if you do, don't forget that I gave you a little hint. Wow! Even I might have to go back on the Council again. Oh dear, that will be no good, I wouldn't be able to rubbish us, nor would us be able to punish I. Oh dear, oh dear!!

I asked Keith to blow down the ears of all of my spies over the W.I.A. session on New Year's Day, the first of the month and no news whatsoever. Well, you should have heard the comments on the call-back. I got the impression that I was Simon Legree, although just who was Uncle Tom I will never know. However it had the necessary effect, because Uncle Tom 5TL from Renmark came dashing in with his reports the next day, and had even extended his activities to Alice Springs.

A local Alice boy by the name of Graham Jenkins has passed the Z license (under the coaching of Frank 8AE and will be doing something in the near future as finances and circumstances permit. Nice work Graham, and you too Frank, if everybody gets one more into the ranks our chance of survival gets better. Don't forget, weight of numbers always counts with officialdom.

Les 5UX by this time will have taken up his residence at Alice, and will be wielding the chalk at the Alice Springs East School as headmaster. He dropped me a line to say that he was looking out for a good rx as he expected to be the only VK8. How wrong can one be? The place is teeming with them Les! Not too much of that cane old boy, whacko, fancy getting six handers from that hunk of muscle, given with his usual smile, no doubt.

Fred 5MA not very active on radio at the moment, is spending most of his time on "standby" in this hot weather, and has had a number of interruptions to both leisure and slumber, because of being wanted elsewhere.

Hughie 5BC is in the midst of the home preserving season and is spending a lot of time washing jars and bottles for the apricots, etc., and probably will be a little more active on the air after the jam season. I have cleared six shelves in my pantry, Otto, will that hold it all??

Tom 5TL is happy again. He is no longer making appearances in the national programme for the A.B.C., although he has not stayed off the air to achieve this distinction, and has been playing around with a slow motion dial that he acquired from a certain VK3 disposals shop and reports good results. So much so, that he has written a screed of the conversion of the dial for the VK5 journal, which I will have great pleasure in delivering to them. Nice work, Tom, wish that there were more like you. Not too many of course!

My shots at Comps 5EF on the matter of s.s.b. have given us both, and probably others, plenty of amusement, but I was stricken to the core the other day to receive a letter from Stan 2EL in which he alternately patted me on the back and kicked me in the part where I stick out the most. I am that used to VK5 never taking me seriously that I did not for one moment think that anyone else would, to say nothing of the fact that I did not think that my humble efforts in the magazine would be read by any other Division, that I received something of a shock to note that my remarks possibly could have offended, unconsciously on my part, a number of the addicts of s.s.b. To these gentlemen, and any others who may have made the mistake of taking me seriously on perhaps some other subject, I offer my humble apologies. I never realised that I had the power to stir the passions of man with my pen!!

Half of VK5 must be on holidays travelling around and around, judging by the post cards that I have received following my aforementioned request to Keith 5WI to crack the whip around my team of spies. One card was addressed to Miss P. Parsons and was duly sent on by me to my daughter, only to be returned to me by my son-in-law (whom I think has always been a little dubious of me) with the suggestion that the P. was meant for Pansy, and the sender was Spy 999, or better known as Frank 5MZ, temporarily based at Mount Gambier, and having the time of his young life visiting all the local boys. Apparently his accident rating is still OK because at the time of writing no reports noticed in the paper of anybody falling in the Blue Lake! Incidentally, Frank took the passing of Jim 3LM pretty hard, they were a little more than radio buddies. Frank describes him as a real "White Man".

Another card from Joe 5JO who is apparently on a round trip because this one came from Currency Creek, near Victor Harbour. (In the money, Joe? Get it? In the money, Currency Creek. Oh I am a wit, I am killing myself.) Anyway, Joe called on Pat 5KM and Ron 5KN who apparently spend all their time fixing up the local goggle boxes and therefore only have time for Amateur Radio when emergencies occur, according to their past record anyway.

Received a long letter also from a new spy in Frank 8AE from Alice Springs, confirming an earlier paragraph received from Tom 5TL and also details of the Alice Springs Youth Centre, which I am keeping for next month. Many thanks, Frank.

My abject apologies to the Elizabeth boys, no notes this month. Ian 5QX scribbled me out a few at the Xmas meeting, but on looking back I distinctly remember complaining as to how tough one of the Ham sandwiches seemed to be, apparently the said few notes got into that sandwich because I certainly can't find them. Oh well, nobody can say that I don't digest the news from my spies!

Just as I was putting these notes to bed, a couple of days late, incidentally, news reached me that 5PB (known to me as Wally Burford) had passed away a few days before Xmas Day. He had lived at Naracoorte for many years, but about nine months ago he had shifted to VK3, and we in VK5 had lost touch with him. Lacking at the moment any details, there is not much I can say, except that I was sorry to hear the bad news and hope that his passing was peaceful.

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TASMANIA

The club room fund has made considerable growth just recently. Several donations have been received for which the committee and the Council are very grateful. In addition to donations, the auction of donated surplus gear at the December meeting yielded a profit of £35/2/-. The final profit figure from the Cabaret held on 16th Dec. has not yet been determined. While the profit from this function was not great, yet we can be satisfied with the function as such. We have learned how to conduct such a function, we have learned from our mistakes which will be rectified at the next such function, and there are two results which encourage the committee very much indeed. First, the social side of the Institute at the Christmas season was very well catered for, and secondly, the attendance from non-members and the publicity in the eyes of the general public can only be of assistance to us in the future.

Christmas has gone once again, and the portable stations heard were 7CH, 7KA, and 7MF. As a result of the holiday season, the attendance at the January meeting was far below the usual meeting. We had a most enjoyable and instructive presentation of slides of various aerial systems presented by Len 7LE, and the cordial vote of thanks afterwards was well merited.

Members may have noticed that our VK7 Bulletin is now posted at bulk postage rates and is registered as a periodical with the Post Office. This result has been achieved by the joint efforts of Tom 7AL and Ken 7KA, and will result in a considerable saving of Institute money per year. It was a job well done, chaps.

Remember the National Field Day Contest, the second week-end in February. Go out into the field if you can, or take part from home.

Mike, of the Shortwave Listeners' Group, has passed his examination and has gained his limited license. Mike, however, hopes to gain his code before taking out a call sign. Ted 7ZAU also hopes to gain his code and to have a full license by the end of February.

Finally, as convener of the club room fundraising committee, I would like to thank publicly Brian 7ZBE and Myles 7MF for their excellent and well-sustained work on behalf of the cabaret recently held. Although they did not do all the work, yet their efforts materially and substantially ensured the success the function undoubtedly was.

HAMADS

Minimum 5/-, for thirty words.
Extra words, 2d. each.

Advertisements under this heading will only be accepted from Institute Members who desire to dispose of equipmen which is their own personal property. **Copy** must be received at **P.O. Box 36, East Melbourne, C.2, Vic., by 8th of the month, and remittance must accompany the** advertisement. Call signs are now permitted in Hamads. Dealers' advertisements not accepted in this column.

FOR SALE: Aegis Coil Unit, 4 bands KC4, complete with valves, copper chassis and cabinet. Also Tape Deck, Collaro 3 speed, complete with coils and circuit. New. Both best offer. J. Wright, 6 Autumn St., Coburg, Vic. FL 4832.

FOR SALE: AR8 Rcvr. with a.c. p.s. and 8" Spkr., £20. Hallicrafters SX16 Rcvr., 540 Kc. to 65 Mc., fair order, £35 or offer. AT5 Tx with sep. modulator, £10. Trimax Mod. Trans., £5. 5AX pre-selector in case with p.s., £5. Want 2 Meter portable Tx/Rx with 12v. p.s. VK3OM. Phone 560-9215.

FOR SALE: Geloso V.F.O. 4/104 with valves, £8; 10w. Transceiver, 240v. a.c. covers 80 and 40, £15; 30w. Modulator, complete, Class B 807s, £12; or will exchange for good Rx. VK2WY.

FOR SALE: Pair Air Dux American Bifilar wound Balan Coils. Suitable for power outputs to 200 watts. As new. £3. Eccleston, 146a Cotham Rd., Kew, Vic. WY 3777.

FOR SALE: R. & H. 5 inch C.R.O., spare 5BP1, £35; Type A Transceiver, £15; both complete in new condition. W. M. Crawford, Box 142, Kingston, South East, South Australia.

SELL: Commun. Recvr., "Drake 2A," new. Contact VK3AIL, Ph. 57-5994.

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WANTED: C.R.O. Indicator Unit, Type A1047. Russell Bradshaw, VK3SX, BJ 1903.

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- Full voice control and anti-trip system.

The S.S.B. Generator:

The exciter section of this S.S.B. transmitter employs a crystal filter based upon the G2NH design. A 12AU7 is used as a 435 Kc. crystal oscillator and phase splitter to drive the balanced modulator at low impedance. The balanced modulator consists of a matched pair of crystal diodes into which audio is fed at low impedance. The modulated signal is then passed through a half lattice filter which rejects the unwanted sideband and provides a passband flat within 3 db. between 250 and 2,800 c.p.s. Four crystals, vacuum mounted in B7G valve envelopes, are employed (two in the half lattice filter, one carrier oscillator and one series rejector at carrier frequency). The lower sideband generated is amplified and fed to the grids of a second balanced modulator (or 1st mixer). The output of the V.F.O. is balanced out in the anode circuit of this balanced modulator. The resultant 80 metre output is available for amplification and, being lower sideband, is suitable for operation on this band.

For operation on bands other than 80 metres, a crystal oscillator/frequency multiplier is switched in automatically by means of a wave-change switch. The output of the oscillator is fed into the 2nd mixer. By selecting suitable mixer crystals, upper sideband output is obtained.

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